# THE GENESEE FARMER.

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PUBLISHED BY LUTHER TUCKER.

THE GENESEE FARMER.

SATURDAY, NOVEMBER 30, 1839.

☞ The INDEX to Vol. 9, will be sent to subscribers as soon as it can be got ready—probably in the course of two or three weeks.

### To the Patrons of the Genesee Farmer.

The readers of the Farmer are already aware of the union that has been effected in the publication of the Genesee Farmer and the Cultivator; and the present is the last number of the Farmer that will be issued. The Genesee Farmer has been so long a subject of care and solicitude with us —of anxiety and responsibility, that had not the belief that we were effecting a public good by its continuance been firmly impressed on our mind, it probably would not have out-lived the first few years of its existence. But its age of infancy and weakness had passed; the able pens that furnished the most invaluable aid to the first years of the paper, continued their kindly efforts in its behalf; its beneficial influence, and the public feeling in its favor, continued to widely extend; new pens were annually enlisted as contributors; and a circulation at first counted by hundreds, has increased to thousands. It has brought us into direct intercourse, and familiar acquaintance with many of the best and noblest spirits of our land; and the pages of the Farmer have proved a common field where men of all professions and pursuits have met; and, under the influence of the best and kindliest feelings, labored together for the common weal.

With our mind filled with such pleasant remembrances and associations, if we supposed the contemplated change was to produce any effect in dividing us from our many, and as events have proved, faithful friends, we should sink the name of Genesee Farmer with unfeigned regret; but as we believe the change contemplated will only operate to introduce us to a more extended field of usefulness; and as we confidently trust to carry along with us the aid and good wishes of our friends, and merit their continued confidence and support, by unwearied exertions to render the new journal worthy of the liberal patronage both Farmer and Cultivator are now receiving, we shall close the course of the Farmer with the assurance that we shall soon meet our friends under partially new, but not less favorable auspices.

Commencing with a few hundred subscribers, and closing its ninth year with a list of near twenty thousand, (including both the weekly and monthly series,) we feel it due to say, that this increase in public favor, and consequent ability to benefit the agricultural cause, has arisen from the numerous favors we have received in the form of contributions from a large circle of scientific and practical men,—papers which have given a character and elevation of standing to our publication it could not otherwise have hoped to attain. We are gratified in being able to state, that from the most of these we have received testimonials of their approbation of the proposed arrangement, and assurances that their aid will not be wanting to assist us in our efforts to improve and establish on its proper basis, that art of all arts, the noble one of agriculture.

With this imperfect expression of our intentions and feelings, our wishes and belief, the Genesee Farmer in its separate and independent existence may be considered as finished. In its new and improved form we trust it will not be found less interesting or less useful.

☞ The extracts from the Penny Magazine, on the propagation of smut, &c., furnished by B. S. G. have already been published in the Farmer.

☞ Subscribers to *this paper* should remember that the Cultivator will *not* be sent to them, without a special order to that effect, except in cases where advance payments have been made for the Farmer. We hope, however, that we shall have the pleasure of finding their names enrolled on the subscription list of the united paper.

### CAUTION TO POSTMASTERS.

We find it necessary to republish our exposition of the conduct of J. E. Force, as we learn that he is flooding the country with his spurious Prospectures, in the hope, probably, that they will fall into the hands of many persons who will not see our statement, and he thereby be enabled to obtain *advance payments* on the credit and reputation of the genuine Genesee Farmer. It therefore becomes necessary to give our expose a more extensive circulation, that the friends of the Genesee Farmer, and the public generally, may be on their guard against the gross imposition attempted to be practiced upon them, in thus sending out (with my papers in some instances) a Prospectus purporting to come from my office. As a specimen of the views taken of the matter, by those who understand it, we publish the following extract of a letter from one of the most distinguished advocates of the Agricultural interest in Western New-York. He says:—"What an infamous scheme your letter has exposed. I am glad they started so early, as I think your exposure will put on the cold water effectually for a time. The project will probably revive again in some form, but hardly, I imagine, in one so rascally. You may use my name in any way you think best, to counteract the scheme. I should have expected nothing different from Goodsell, and Force, I think, could have been only a tool. I have read your expose, and, though pointed, I do not think the language any too strong to properly characterize such conduct. 'Connected with the Genesee Farmer for a year,' Force says. Some years since, at a show in New-York, a company of gentlemen and ladies were admiring a beautiful volume—its printing, binding, &c. when a miserable fellow came up and claimed the credit of its execution. The assertion was doubted, and when pressed to tell what part of its execution belonged to him, he stammered forth at last,—'I made the paste!' Such is pretty much the part Force has performed in the office of the Genesee Farmer."

### GROSS IMPOSITION.

I have just seen a Prospectus, headed "Genesee Farmer Extra, 1839," for what purports to be a "new series" of the "Genesee Farmer,"—"N. Goodsell and J. E. Force, editors, and J. E. Force, proprietor,"—a large number of which, I am informed, have been printed in this city for circulation abroad. Justice to the public, as well as a regard to the good name of myself and paper, seem to render it obligatory on me to caution the public against this spurious Prospectus, which has been got up by a young man not yet of age, who has been employed in my office for a year past to keep my accounts and mail my papers. Had not Force and Goodsell, however, placed *the name of the Genesee Farmer* at the head of their Prospectus, thus giving it the character of an Extra issued from my office, and made statements which are altogether destitute of truth, I should not probably have deemed it necessary to have noticed their efforts, notwithstanding the dishonesty manifested in filching the name of my paper, and the perpetrator at the same time appropriating to himself the confidential knowledge of my business, books and correspondence, while yet in my employ. A simple statement of facts will serve to show whether the public will be likely to receive in return for their money, a paper of the high character of the present Genesee Farmer, or even any paper at all for any length of time. J. E. Force, who represents himself as proprietor, claims "a year's connection with the Genesee Farmer," from which the public might infer that he was or had been either one of its editors or proprietors. It is proper, therefore, to state the extent of his "*connection* with the Genesee Farmer," which consisted in his being employed in the office the last year to pack and carry the papers to the Post-Office at a salary of five dollars and a half a week. This Mr. Force, in an introductory note to the prospectus, which he acknowledges was not written by himself, is made to say that "he has engaged the editorial assistance of those who were formerly its editors, together with a number of its contributors." And the same thing is said in the body of the prospectus in still stronger language, as follows:—"The new series of the Genesee Farmer will have the editorial powers of gentlemen already distinguished in this cause, and long engaged in the editorial department of the old series, and thus offer the best security in return for the patronage of the public."

The representation here distinctly made is that the spurious Genesee Farmer is to be conducted by the editors of the *present* Genesee Farmer. Indeed the pledge that it is to be under their control is given as "security" to the public that the paper will be worthy of their patronage. The public can judge of the value of this "security," when they are informed that the statement is entirely *destitute of truth*—and that *no person* connected in any way with the editorial department of the Farmer for the last six years, has been or can be engaged to aid the proposed dishonorable attempt to transfer to an irresponsible concern the reputation or patronage obtained by nine years indefatigable service in the cause of Agriculture by the present conductors of the Genesee Farmer. It is, however, proper to say that the "N. Goodsell," whose name figures in the Prospectus with that of J. E. Force, was employed as a writer for the weekly Farmer during the first years of its existence; but he *six years* ago, without a moment's notice, or a word of difficulty occurring between us, broke off his engagement, and started an opposition paper called "*Goodsell's* Genesee Farmer," which proved an entire failure, as he did not succeed in withdrawing from my paper either its reputation, correspondents, friends or patronage; and the *base attempt*, as it was considered by all familiar with the circumstances at the time, proved an utter abortion, the paper having never completed its first volume. The public will be able to judge from this statement of facts in relation to "N. Goodsell and J. E. Force," whether their Prospectus is worthy of credence, and whether they will be likely to receive a paper worthy of their patronage, *or even any paper at all for any great length of time*, for such payments as may be remitted in advance for the counterfeit Genesee Farmer.

The contemplated union of the Genesee Farmer and Cultivator, (occasioned by the lamented death of Judge Buel,) has, so far as has come to our knowledge, received the warm approbation of the friends of both papers. It may, however, not be amiss to caution the public against any *other attempt* which may be made to build up a spurious paper on the reputation and character of the Genesee Farmer, and thus defraud and disappoint the public, as we learn that there are other persons in this city who are prepared to make the attempt in case of the failure of the above named persons.

LUTHER TUCKER.

### Postscript.

Since the above was written, I have learnt that Force has sent off to the West large numbers of these Prospectuses *with the November No. of the Monthly Genesee Farmer*, the mailing of which he has delayed probably for that very purpose. Postmasters and others should therefore be on their guard against this Prospectus of Force and Goodsell, as it is not unlikely that they may find some of them done up in my papers. It may be proper also to state, that Force now assures me thathe

*shall not issue the proposed paper*, which I presume will prove true, as he must have relied upon anticipated *advance payments* for the means necessary to go on with it.

### SECOND POSTSCRIPT.

Force, who mailed a part of the November Monthly Farmer, was directed to put into each parcel a Prospectus for The Cultivator, but we have great reason to fear, from the following letter, that instead of sending our Prospectus, he sent his own, with such of the Farmers as he mailed:

Milan, O., November 26, 1839.

Mr. Tucker—In your last No. of the Farmer you state that you will forward with each package a Prospectus of the united paper of Farmer and Cultivator.—As yet I have received none, but have received one of the Genesee Farmer to be conducted by Messrs. Force & Co. Now this work is new entirely to me, and I know nothing about its proprietors, and cannot speak in favor of it. I wish therefore you would, on the receipt of this, send me immediately two Prospectuses for the united paper, so that I can solicit subscribers for it, and oblige yours, &c.

### Wheat in New Hampshire.

Many of the farmers of the Granite state have, within a few years, produced wheat crops, which, in extent and value, are worthy of a place on the page that records the golden ingatherings of the fertile west. Col. Learned, in particular, on his extensive farm on the Black Mountain, as it is called, in Piermont, has set an example in this respect worthy of imitation in the east. In 1835, on 20 acres, he raised 500 bushels; in 1837, on 37 acres he raised 1084 bushels; in 1838, on 29 acres he raised about 700 bushels. The land was new cleared land, only cleared of the timber and burned over.—The land he paid one dollar per acre for, and the clearing cost ten dollars per acre.

Spring wheat was the kind exclusively used by Col. Learned, and the kinds preferred have been the common bearded, and the bald or tea wheat. He has also the present season sowed a quantity of the Black Sea wheat, with what success, has not yet been learned by us. Col. Learned has as yet suffered little or no loss from the worm which has done injury in former years to eastern wheat; is it not possible that the ashes existing in the newly burned soil, may have had the effect of preventing their appearance? Some experiments made in sowing ashes with, and on wheat, would seem to indicate that such is the case. The wheat crop in Maine and New Hampshire has the past season been a good one, and the probability is, that by an improved cultivation, the use of lime, and the better management of manures, the old fields of New England will again supply her industrious sons with bread in abundance. Such at least is the cheering prospect.

### THE GEOLOGICAL REPORTS.

After a long *suspension*, regretted by us, but unavoidable, we *resume* our notices of the Geological Reports.

It appears that such formations of the western part of our state, as extend far south into Pennsylvania, are generally much thicker at their southern outcrop. Thus Professor Rogers found by actual admeasurement in that region, that the thickness of the strata between his V. Formation and the coal fields, was 19,000 feet; while Professor Hall, measuring up the Genesee River, found the geological ascent to be only about 5700 feet. We make this explanation now, as an apology for our oversight of last year.

We shall only mention one of those formations by way of illustrating the fact of their thinning out in this district however; and this is the VII of Professor Rogers's scale, distinguished as a coarse whitish sandstone, rather loosely cemented, and containing the hollow moulds of several kinds of fossil shells near the surface, but the shells themselves in the interior parts. Prof. Vanuxem of the Third Geological District says:

"For the present it may be called the Oriskany sandstone. This sandstone is well known to extend over many of the States, occupying like all geological masses, a fixed position in the whole series, but is exceedingly valuable as to thickness. According to the report of the State Geologist of Pennsylvania, it is there 700 feet thick. At Oriskany falls about 20 feet, on the road from Elbridge to Skaneateles, it is over 30 feet. At the quarries near Auburn, it is from a few inches to about 2½ feet; and at Split-Rock near Syracuse, it shows itself in some parts by a mere sprinkling of sand, observable on the bottom of the layer which covers it, and in other parts by a thickness of about six inches."

Great quantities of this rock are scattered over the western part of Cayuga county, where it had probably acquired a greater thickness, yet we have no certain accounts of its having been found further west.

There is one deposit, however, which forms a remarkable exception to the rule we have just noticed. This is the fossiliferous iron ore of some of our northern towns.

"The ore near Danville [in Pennsylvania] says Professor Vanuxem, "corresponds in its fossils with the second bed—in Lenox—Westmoreland," &c. "The perfect identity of the Pennsylvania and New York bed, show the extent of this thin deposition. It has long been known that the iron ore beds in New York extended from Herkimer to the Genesee River, and now we know that one of them extends south 160 miles."

Yet it appears not to exceed the thickness of 2 feet in Pennsylvania, nor 3 feet in this state, even supposing that the beds in Wayne county are identical; but the thickness both east and west of these, is much less.

The remarks which follow, by Professor Vanuxem, are too interesting to be omitted:

"From all observations made, it is certain, that there are two distinct beds of red oxide of iron in the protean group, arranged in lines parallel to each other, extending from Herkimer to the Genesee river. These beds are about 25 feet from each other. They are not always present in every locality, for sometimes the one, and sometimes the other, and even both are wanting: A circumstance readily conceivable over so great an extent, with masses comparatively thin, where opposing currents both general and partial may have existed, and where the surface over which the iron floated may not have been level.

"It has happened, no doubt frequently, that the surface over which the iron was floated admitted of its fine particles to escape, that is, to be absorbed by the floor upon which it was deposited. In this way we can explain the stains of iron upon the shales of Little Sodus bay, and of the mill at Martville. A whole bed could not disappear unless passing over coarse sand, for the grains of which the greater part of the ore consists, must have been formed at the point of thermal action."

The salt springs of the state of New-York, are generally found in the vicinity of red sandstone or red shale; but those which we shall notice, belong to *two* very distinct formations.

"The red shale," says Professor Vanuxem, "forms the base of the salt springs found along the course of the Erie Canal [east of the Seneca river]; and has often been confounded with the red sandstone of Oswego, and its prolongation, the sandstone of Rochester and Niagara. *The two rocks have no connection with each other*, being separated by the Protean Group; nor resemblance, excepting that the same ferruginous material colors them both, and both are connected with saliferous sources."

We may add that the Onondaga and Montezuma springs belong to the upper or newer formation.

There is also a difference in the quality of the salt.—"The red sandstone, "says Prof. V. "is the lowest rock geologically, of New York which contains brine springs of sufficient purity to be manufactured into salt. From the eastern part of Oswego county to the Niagara river, [and for some miles beyond it,] numerous brine springs are found in this red sandstone. All the springs in the Third District which are found in this rock, and there are several in Oswego, *yield the same kind of sharp tasted salt*, described as the salt petre taste, and all highly colored with iron: characters different from the salt of the brine springs which belong to a subsequent deposit, and show a difference of source or contamination from being deposited with a different rock."

We do not know that Kenhawa salt is similar to that made from springs in the red sandstone, but we were informed some years ago in the western country by a very intelligent gentleman, that hams cured with that salt required no particular application of nitre; and resembled in redness and in flavor such as were well cured with this mineral in the usual way.

Professor Vanuxem says the borings and wells which have been made at Syracuse, Salina, Liverpool, Geddes, Montezuma, &c. prove that *the brine or salt water exists in all those places in reservoirs*, which are of two kinds: One formed of porous or loosely aggregated rock; the other consisting of the deep bottoms of ancient vallies now irregularly filled with "alluvial" materials; and that in all probability, these reservoirs, when not remote from each other, more or less communicate together. He further remarks, that the deeper the wells are sunk in the "alluvial," all other circumstances being the same, the stronger will be the water; and as the deepest "alluvial" must be where the ancient valley was deepest, this place must be first determined when stronger brine shall be needed.

"In this report," says Prof. V. "I do not assert that *rock salt* has no existence within the district, for no proof is known that it does not, or proof that it does. It is very certain that the surface of the hill between Salina and Syracuse exhibits proofs innumerable of the removal of a soluble mineral; the species yet remains to be determined.

"There are three abundant minerals which are soluble in water—carbonate of lime, gypsum and common salt. Each of them produce sink holes in consequence of this property. It is not at all impossible that salt in abundance may have been deposited near the sink-holes.

"The place to bore for salt is below the level of the waters, in that portion of the third deposite which contains the hopper cavities and porous rocks, and which from the dip of the whole group, must be sought *south*, and *not north* of Syracuse."

### A Few Words to C. D.

We have no unkind feelings toward either the State Zoologist, or the State Botanist—far from it. We censured them chiefly on the principle that *no agent ought to draw money from the treasury, year after year, without notifying the proper department that he was doing something to earn it;* and no person, however distinguished, ought to presume on any exemption from such responsibility.

We did not mean to intimate that their salaries were too high, but only that they amounted to a sum worth looking after. Compared with the high qualifications of the incumbents, our opinion is, that those salaries are moderate.

But we are told they cannot make partial reports. Does C. D. himself believe this a valid excuse? The State Zoologist and State Botanist, of Michigan, do not believe it, if "actions speak louder than words," for each has made a partial report, and we respect them for it. Such things can be done at Detroit, and why not at Albany?

Besides we should suppose in the present case that due respect towards the Executive would require some kind of report. T.

### Improvement in the Manufacture of Salt, and its Value for the Purposes of Agriculture.

T. L. S. Menteath, Esq. of Canandaigua, has placed in our hands a pamphlet on the above topics, published in London in November, 1838. It consists, in the first place, of an explanation of the advantages of Wilson & Baylis' improvements in the manufacture of Salt; and secondly, of an elaborate essay on the use of salt as a manure, or stimulant, by Cuthbert W. Johnson, Esq.

In a late paper in the Genesee Farmer, we mentioned some of the methods in use in different places for making salt; particularly in Germany, where large quantities of excellent salt are made from water containing only from 2 to 3 per cent of salt in solution, whereas our springs that are worked usually give from 10 to 17 per cent. The patent process of Wilson claims the advantage of reducing the weakest brine from interior springs, or from sea water, to the point of saturation, at an expense much less than any hitherto known, making a superior quality of salt, and affording to the evaporators a constant supply of saturated brine, whatever may be the weather or the season of the year. If, as the patentees assert, "*the produce will be more than double the quantity, the salt of a superior quality, with the same quantity of fuel now used, at a cost not exceeding five shillings [sterling] per ton, where satura-*

*ted brine can be procured;"* the process must be worthy the attention of the salt manufacturers in this country, particularly those of Onondaga and Kenhawa.

But to the farmer, the interest of the pamphlet will be principally found in the able essay of Mr. Johnson, who has evidently embodied in the paper the fruits of long research, and the results of many experiments.—The idea of applying salt to land as a manure, has long since been suggested; but its well known deleterious effects on plants when applied in any considerable quantity; the fact, that its application made little or no perceptible difference in the growth or appearance of plants; and a want of knowledge of the kinds of soil on which it would be most likely to be useful, has prevented its use to any considerable extent. Some farmers are perhaps prejudiced by the name, *salt*, forgetting that the two most active mineral manures we have, the carbonates and sulphates of lime, are, strictly speaking, salts only. Gypsum is lime and sulphuric acid combined; common salt is muriatic acid and soda, in the same state. Reasoning from analogy, therefore, we should infer that salt must be a stimulant to plants; and the experiments of Mr. Johnson abundantly show that such is the case.

In the use of salt, Mr. J. recommends on wheat from ten to twenty bushels per acre, and for barley and oats from ten to sixteen. The salt to be applied to the soil some two or three weeks before sowing the seed. The benefits he enumerates as follows:

"1st. By *promoting* in *small* proportions, putrefaction. 2d. By destroying weeds, grubs, &c. 3d. As a constituent or direct food. 4th. According to Drs. Darwin and Priestly, as a stimulant to the absorbent vessels of plants. 5th. By preventing injury from sudden transitions in the temperature of the atmosphere; and 6th. By keeping the soil moist."

Salt is found the most efficacious on soils that are inclining to be light or sandy, agreeing in this respect with gypsum. Lime, for the purposes of agriculture, is found to be far more efficacious if slacked with brine, instead of water. The celebrated Padstow sea-sand, of which such extensive use is made in the West of England, nearly 60,000 cart loads being annually taken away by farmers, is found by analysis to be calcareous, and when wet with the sea water, to be one of the best of manures. We should be pleased to extract liberally from Mr. Johnson's paper, but our limits forbid. We give, however, the following remarks on the use of salt on wheat, with a few examples of its effect on some other crops. Mr. J. says:

"Whoever makes trial of salt as a manure must be attentive to the rules laid down by those who have for years employed it for such purpose; otherwise, without any beneficial result, every experiment will merely serve to prejudice others against its more judicious employment:—thus, salt, it should be remembered, *rarely causes the wheat plant to grow larger or taller*, but it fills up the ear better, and brings the weaker plants forward. We have it on the authority of Mr. Sinclair, that "salt appears to lessen the produce of straw, and increase the weight of grain." I have never been able in my experiments, nor in any I have witnessed, to see any increased quantity of straw, even in cases where there was an increased produce, by means of salt, of six bushels of wheat per acre. I cannot enforce this too much upon the attention of the agriculturists. Let not the farmer be deceived by appearances; let him have the salted and unsalted portions, at harvest time, carefully separated and examined by weight, if the plots are small, or by measure, if extensive. A few square roods, or even yards of each, will be sufficient; and I have no hesitation in saying, that he will find the result highly in favor of salt: but if, on the contrary, after having carefully applied salt to *half* of the field, he judges at harvest time merely by his eye, in such an unfortunate case, let me request of him, for his own credit's sake, not to mention *his experiments* upon salt manure; how carefully he tried it, and how complete was its failure: let him be assured that such modes of investigation, though very common, are worse than useless to the agriculturist; are marks of obstinacy and presumption to be excused only on the plea of ignorance.

Let the salt be applied some time before sowing the seed, not less than ten and not more than twenty bushels per acre. I regret that I cannot transcribe from my Essay on Salt the experiments of Mr. G. Sinclair upon wheat (page 39); they are too numerous for this Tract, and too valuable to be mutilated by an abridgment.

In my own experiments upon a light gravelly soil, at Great Totham, in Essex, the use of twenty bushels of salt per acre, (in 1819,) produced an increase of five bushels and a half per acre.

The following statement of the result of some trials in 1820, will show how important may be the result to the country at large, by its judicious application. I regret that incessant employment of a very different nature has hitherto prevented by continuing these experiments.

| PRODUCE PER ACRE. | Bhls. | lbs. |
|---|---|---|
| No. 1. Soil, without any manure, for four years, | 13 | 26 |
| 2. Soil manured with stable dung to the previous crop, (potatoes,) | 26 | 02 |
| 3. Soil, with five bushels of salt per acre, and no other manure for four years, | 26 | 12 |

The soil light and gravelly.

The testimony of a plain Essex farmer may have some weight in corroboration of my own, even with the most suspicious. 'The soil,' says Mr. James Challis, of Panfield, 'that I described to you to be of rather a loose, hollow description, had a dressing of salt put on it in November, after the wheat was sown, about fourteen or fifteen bushels per acre: it produced at the rate of six bushels per acre, more than that which was not dressed, and it may be stated to be £1 per load of forty bushels better in quality.'"

In describing the effect of salt on barley and oats, he says:

"Apply from ten to sixteen bushels per acre just before you sow the seed. Mr. Legrand, a Lancashire farmer, states, 'in a sandy soil I can assert sixteen bushels to be a proper quantity for a statute acre; it gradually advanced in its beneficial effects to sixteen bushels, and as gradually diminished to four bushels, where vegetation was stopped.'

"A Norfolk farmer, Mr. Ransom, of Sproughton, also says, when speaking of his experiments on a light sandy soil, 'The barley thus dressed, *presented no difference of appearance to the rest of the field*, until within a fortnight of harvest; the salted crop was then brighter, and about one week forwarder than the rest of the field.' The following are the results, when carefully cut and measured:

| PRODUCE IN BUSHELS. | Per Acre. |
|---|---|
| Soil without any manure, | 30 |
| Soil dressed with 16 bushels of salt per acre, in March, | 51" |

Of the value of salt given to cattle, horses, and indeed to stock generally, no farmer can doubt. The value of hay or straw is greatly enhanced by being sprinkled with brine; and, in our opinion, should be used in this way much more extensively than it is. Mr. J. strongly recommends it for its action on all insects that infest soils, particularly grubs and slugs; and there can be little doubt that all such, if touched by salt, would be destroyed at once. We think that all farmers who have the kinds of soil described by Mr. Johnson, or those that are sandy, or on which plaster produces a good effect, might try salt with advantage. Extensive experiments would not be perhaps advisable; but if salt possesses the virtues ascribed to it by Mr. J. and other agriculturists in Europe, our farmers should be able to avail themselves of its benefits.

## Agriculture in Asia.

We extract from that most interesting work, Malcom's Travels in Southern Asia, some notices in relation to the agriculture, plants, and animals of that section of the globe. Mr. Malcom's remarks principally relate to Burmah, Siam, and the peninsula of Malacca.

Cultivators of the soil do not reside on detached farms, but always in villages, for protection against wild beasts and robbers. Indeed as to a *farm*, there is no such thing in Burmah. Tillage is performed in some places almost exclusively with the hoe and mattock; in others the plough is used, and sometimes rice lands are broken up, and after being kept wet for a time, merely by the feet of oxen. The plough resembles, in shape, the spade on a playing card, has no coulter, and cuts to the depth of 3 or 4 inches. Oxen are used, and are driven by a cord passed through the septum of the nose.

Rice, being universally preferred to every thing else for food, is cultivated wherever it will grow. It is here a beautiful grain, and on the rich river lands yields more than a hundred per cent. The Burmese have a great many varieties of this valuable plant. Mr. M. saw as many as eight or ten.

Cotton is grown in every part of Burmah; much of which is used in the country, but large quantities are exported. As civilization advances in the east, it is possible the most formidable rivals to our cotton growing states may be found springing up there. The nankin, or red cotton, is cultivated largely, and principally used for women's dresses. Cotton seed is highly valued in Burmah, and applied to a variety of uses not thought of here. It is soaked till it sprouts, and is then extensively used and highly prized as food. Tobacco grows in every part of the east, and in Burmah is used to excess for smoking, children, females, and all, being rarely seen without a segar in their mouths.

The uplands produce wheat and the other grains, in abundance, and of the best quality. The wheat crop is from twenty to fifty fold; the berry is fine and large, and the price at Ava always less than that of rice, or about fifty cents per bushel. Several kinds of millet are cultivated, but though considered valuable are little used for food so long as rice can be obtained.

Indian corn grows well, but is cultivated in a most slovenly manner. It is usually eaten green, boiled or roasted, and in this state can be obtained in the markets or bazars at all times. It is rarely fed to animals, and the common yield is from fifty to seventy fold. Several kinds of pulse are cultivated, such as peas and beans, principally the latter, and produce abundantly.

The teaplant is indigenous in the northern provinces, and is raised in large quantities for exportation to the rest of the country. Part is prepared as a pickle, and is a favorite article of food; part is made into balls and dried in a hard and round form. The quality is fully equal to the China black teas, costs at Ava twelve cents per lb., and there is no obstruction. The green tea plant is unknown in Burmah. Black pepper is indigenous, and might be raised in any quantity, but the natives prefer the long red pepper as a condiment. This might be made an important article of export as well as tea. It grows wild, and though cultivation increases the size, it does not add to its pungency.

The sugar cane attains its full size and richness here, and sugar might be made to any extent. Indigo grows wild, and it is also cultivated to some extent. The whole process, however, is unskilful, and the product is only for home consumption. Garden vegetables are cultivated by the foreign residents, and in part by the natives, much the same as with us. Honey is exceedingly plenty, but always derived from wild bees. In obtaining it, the bees are not destroyed.

No domestic animals are common, except horses, horned cattle, and dogs. Animal food being prohibited by their religion, none are raised for food; and woolen garments being little known, sheep are not wanted for wool. Except a flock owned by the king, I heard of none belonging to the natives. English gentlemen sometimes keep a few for the sake of the mutton, which run with the goats kept for milk, and are tended by the same man. *So entirely in these hot climates do sheep lose their distinctive features, that in keeping them mixed with goats, I could never tell them apart. They are never white, as with us, and their wool degenerates into hair.*

The common cattle in this country are almost unknown in Burmah. The braminy cattle, (see page 268 of the British work on cattle, for a specimen of these cattle, called there the Nagore breed,) are used for drawing waggons or carriages, and the buffalo, an animal utterly unlike our American animal of that name, is used for labor on farms. They are generally worked single. As his skin is almost destitute of hair, his way of protecting himself from flies and other insects, is to stand with his whole body immersed in water, only a part of the head being visible. The horse is small, but excellent, resembling in many points the Canadian poney. They are capable of enduring great fatigue, and never need shoeing, but are not used for draught; the buffalo being a substitute for the horse for this purpose.

Fowls of all kinds are very numerous in Burmah.—Of these the braminy goose, a kind of kite, is the sym.

bol of the empire, as the eagle is of ours. Domestic fowls are common, but the one which attracted most notice was a variety of which the feathers, skin and bones, were perfectly black. Mr. Malcom observes that he often ate them, and could perceive no difference between them and the common ones, except perhaps that they were more tender. Fishes are very numerous in the waters of Burmah, more than fifty kinds having been noticed, without attention being particularly directed to the subject.

### Planting Chestnut, or other Forest Tree Seeds.

That quite a large proportion of our country must soon be destitute of timber unless measures are taken for its propgation, as well as destruction, is evident to all. This is particularly true of those sections where the ground is all fit for cultivation, and as soon as cleared is submitted to the plow; when there is little or no timber growing on the lands, as in the prairie districts of the western states; or where the timber is of a nature not to reproduce itself from the stumps, as in the most of what are called beach and maple lands. In all these sections, the planting of forest trees for timber, fences or fuel, is daily becoming more pressing. Where the kind of tree wanted does not exist in the soil, or in the vicinity, recourse must be had to propagation from seed, and this in many cases is much the preferable way.

In raising trees from the seeds, we shall be the most certain of success when we follow the method of nature most closely. In our climate many of the seeds of trees are found to vegetate most quickly if submitted to the action of water and frost; and nearly all require to be kept where they will not become heated or dried previous to planting. Thus thorn seeds rarely vegetate unless repeatedly exposed to the freezing and thawing process; locust seeds require the softening influence of boiling water to soften their hard envelope and allow germination; while the chestnut, acorn, and most of the nuts, will not vegetate if the oily substance they more or less contain becomes rancid, and the seed of consequence injured.

Examination shows that of the seeds of the oak or chestnut that shoot up in the forest, self sown as it is called, the most of them are slightly covered with earth or leaf mould where they fell, and thus remain exposed to atmospheric influences through the winter, ready to vegetate in the spring of the year. But, as when exposed in this way with little or no earthy covering, they are very liable to be destroyed by vermin, it has been found best to keep them through the winter in a position as near as possible to that indicated by nature, yet exempt from the danger to which seeds so treated are exposed. Micheaux, who is excellent authority for the treatment of most forest trees, in his North American Sylva, thus directs the method of propagating the chestnut:—

"After the ground has been carefully loosened with the plow and harrow, lines are drawn six feet apart, in which holes, about a foot in depth and in diameter, are formed at the distance of four feet. A chestnut is placed in each corner of the holes and covered with three inches of earth, as the soil has been thoroughly subdued, the nuts will spring and strike roots with facility.—Early in the second year three of the plants are removed from each hole, and only the most thriving one is left. The third or fourth year, when the branches begin to interfere with each other, every second tree is suppressed. [It may be transplanted where wanted.] To ensure success, the planting should begin in March or April, *with nuts that have been kept in the cellar during the winter, in sand or vegetable mold, and that have already begun to vegetate.*"

Mr. Hopkins, of Cayuga Co., N. Y., made some experiments on planting chestnuts, which he communicated to the N. Y. Board of Agriculture. In his first experiment he kept a peck of chestnuts carefully till December, and then planted them four feet apart each way. Not one of the nuts came up. Next year Mr. Hopkins obtained about the same quantity of seed, and immediately after gathering, planted them about four feet apart as before, and covered them superficially with leaves and light earth. Most of them came up, and grew well.

We have seen beautiful chesnut trees grown in a few years from nuts planted immediately after being gathered; and those of our friends who are anxious to propagate this tree, and have made enquiries on the subject, may, we think, grow them with certainty and success in either of the methods pointed out. Mr. Hopkins's first experiment failed doubtless from the nuts becoming rancid, dry, and thus deprived of their vitality. Micheaux's succeeded because the nuts placed in the earth, and kept at a low temperature, were saved from the partial fermentation, that always accompanies and causes rancidity.

### Disease of Potatoes.

Hitherto the potatoe has been the most exempt from disease of any of the cultivated plants; the least liable to injury from insects; and of consequence the most certain crop that farmers cultivate. The *scab* and the *curl* have been the only known diseases of the plant in Europe, and perhaps not one in a hundred of our farmers have ever seen a case of the latter. The scab affects the tuber, occasioning a roughness of the surface which renders it unfit for cooking, and tho' the presence of this disease may not greatly diminish the quantity of the crop, it materially lessens its value. The cause of the disease does not appear to be well understood, nor does it appear to be propagated, as such potatoes used for seed have not been known to produce the like.

The curl attacks the top of the plant, withers, and finally destroys it. As the leaves curl, dry up, and fall off, the roots cease growing, and where it is general, the crop is of course worthless. So extensive has been this disease in Europe, that it has occasioned much alarm in some seasons as materially affecting the means of subsistence. The most careful and repeated observations have been made, by distinguished farmers and horticulturists, and the results have been published in the London Farmer's Magazine, and in the Edinburgh Quarterly Journal of Agriculture. The conclusions, however, at which these observers arrived, were very variant, as to the causes; some maintaining it to arise from the general deterioration of the plant, springing from repeated plantings without renewal from the seed; others, from defects in the preparation of the soil, and some peculiarities of the season; and others confidently attributed it to the practice of cutting the potatoes intended for seed some days before they were wanted, by which they became dried, and of course their vitality and vigor was materially diminished. Whether any, or all these causes, operated to produce the curl, does not seem as yet to be well ascertained; but for two years past the disease abroad has been much less common and fatal. The most decided case of curl we have ever noticed was two years since in a patch of pinkeyed potatoes, on one side of which, in the same field, was planted the common Sardinia, and on the other the black potatoe. Both these were uninjured, while the pinkeyes were seriously damaged, the produce being trifling, and of inferior quality. These potatoes, however, planted the next year, gave a fair yield, untouched by the curl. Last season calling at the house of a friend, we observed in his garden a few hills of potatoes, of which the curl had taken undisputed possession.—Some others near by were healthy, and the reason of the difference was enquired. We were told that those affected by the curl, were from a few potatoes that had been brought from a distance the fall previous as a new and valuable variety, and had been much bruised and otherwise injured on the journey. It is presumed the disease destroyed them entirely, as their vitality at the time was of the feeblest kind. Did the bruising, and tearing of the skin from the outside of the potatoe produce such a morbid and unhealthy state of the juices of the plant as to cause the development of the disease? Or was it owing to some cause independent of such injuries?

In this country the potatoe has the present year found a formidable enemy in a disease called the *black rust*, and which has caused great loss to the farmers in those parts of New England where it has shown itself. In some parts of that region it has been so fatal to the crop as to materially affect prices. It has been most destructive on low lands, near ponds, sluggish streams, or on low meadows or plains; the more elevated, airy, and dry sections, having generally escaped. In the most unfavorable places, other plants, such as the bean, carrot, sugar beet, and even the onion were attacked. The following notice respecting this new disease is from the Farmers' Monthly Visitor.

"The cause of the rust this season we believe to be the extraordinary humidity, combined with a peculiar state of the atmosphere, at some period in the high heat of summer. It was remarked that the rust struck universally on the same day of August—on or about the 27th of the month. Early planted potatoes were not so much injured by it as the later crop. Last year, it will be remembered, the severe drouth in that part of the country south of a line drawn due east and west, at the distance of fifty to seventy miles north of Boston, generally lessened the crop of potatoes, affecting those early and late planted in a similar manner that the rust has this year injured them. It was too dry last summer, and the uncommon wetness of the present summer, has been alike injurious. More than half the days in June, and two thirds of the days in July, and one third of August were rainy days, as reported by Major Weeks of Lancaster. In a season so uncommonly wet, we could not but anticipate quite as much injury to some crops, as we have suffered. The benefits to the grass crops and the small grains, have amply compensated for every thing."

We trust the causes assigned by Gov. Hill will be found the true ones; and that the experience of another year, will prove that the uncommon wetness of the past summer was the origin of this new disease. In cultivating all plants, however, we think that a reference made back occasionally to the laws and methods of nature will be found useful; as infusing new vigor into the plant, and preventing that deterioration, which disposes every plant to the development of disease in some form or other. We would adduce the Rohan Potatoe as a proof of the benefit resulting from what may be called going back to first principles. This potatoe, it is well known is a seedling, and the vigor of its unimpaired constitution is proved, by the rapidity with which a single eye, with a portion of the tuber not larger perhaps than an ounce ball, will put forth its shoots. Some of the best varieties of the potatoe cultivated in Europe are late seedlings, and we think agriculturists in the United States will do well to follow the example of their European bretheren in their efforts to originate new, healthful and productive varieties.

### Cure of the Heaves.

The following recipe for the cure of the heaves, is furnished us by our agent at Astoria, (L. I.) Mr. Wm. J. Townsend: He says: "I have a receipt for the heaves, which will cure any young horse entirely, and by constant use it will help an old one, so that it will be difficult to tell that he is diseased. I have used it with great success for years. It is as follows:

Take 1 pound of Antimony, ½ pound Rosin, ½ pound of Sulphur, ½ pound of Niter, powdered fine and mixed—give a horse half a table spoonful twice a week, and a cure is certain."

From the New England Farmer.

### Plymouth Cattle Show.—Reports on Improvements.

The welfare of the whole community is very intimately connected with continual improvements in the art of agriculture. Increasing products of the soil are necessary to supply a growing population with food and raiment, necessary to furnish the means of prosecuting other arts in society, both useful and ornamental; and, as the principal source of the capital which moves the commerce of a country, the branch of business which presents so many attractions to young minds. The motives of interest to engagement in this work seem very numerous and strong, yet enlightened and serious minds can discover higher inducements than any of mere temporal interest. In the labors and experiments of the field we become co-operators with the great Author of all things: there we are continually incited to consideration of his doings and purposes; there we are abundantly blessed with the means of that acquaintance with our God which will give peace and all the good an immortal mind can desire. Notwithstanding all the inducements presented to labor in the field, it is often true

that other branches of business obtain a very injurious ascendancy. Numbers of our citizens, like some of the Israelitish worshippers, want a mass of gold immediately before them to stimulate their exertions; a promised land at some distance, though the assurances be repeated and strong, that it shall "flow with milk and honey," does not prove sufficient encouragement to persevering and laborious pursuits, Great haste is made to be rich. This circumstance has heretofore diverted the attention of many from some of the most important objects presented on your list of premiums. Calculations seem to have been made whether the amount of the offer would prove any thing like a compensation for the labor and expense attending the proposed experiment, We hope more just and extensive views are now cherished—that competitors generally seeking and will receive better reward than our hands can give.

We have witnessed with pleasure an increased attention to the renovation of swampy lands.—Some of the choicest treasures of this county have long remained useless and dormant in those situations. We rejoice to see the rigid bands broken and banks of discount opening there. Claims to the premiums made payable in 1840, have been entered by four persons, who in the accomplishment of their respective objects, will add a good number of acres to the productive filds in the county.

Three claims have been entered to the premiums offered to encourage the cultivation of nurseries of Chinese mulberry trees. Be not alarmed, sir, there is no furnace underdeath to force the growth, nor any reckless speculator at your side, who would rifle your pockets by the influence of false representations, who would tell you that every bud in these nurseries is of equal value with a five dollar bill, that the leaves of the tree are healing to every disease which afflicts the body, that they are convertible into pleasant cheering beverages and nourishing food, and that what may not be required for those important purposes can be manufactured into fine paper on which you may write briefs.

The Cultivators of mulberry trees in this county, have not been rash adventurers, and, therefore, will experience less temptation to resort to falsehood and imposition. Some of them feed worms proportionate to the increase of their trees. This we think the proper course, especially when the Morus Multicaulis are cultivated, for it is very doubtful whether those trees will ever be so acclimated here as to endure our winters.

We recommend the award of the first premium of $8, to Mr. Lincoln Jacob, of Hingham, who has cultivated a nursery of 2160 trees. The second of $4 to Mr. Franklin Ames, of West Bridgewater, who has 2150 trees, 1771 more than reported last year. We also recommend that 2 vols. of N. E. Farmer be given Mr. Ames; and 2 vols. Yankee Farmer to Mr Benjamin P. Pratt, of Middleboro', who has a nursery of 1700 trees.

Richard Stone, of West Bridgewater, is entitled to $9, having built the past season more than one hundred rods of stone wall. The same sum is also awarded to Austin Keith, of West Bridgewater, Nahum M. Tribou, John Wood and Isaac Pratt, of Middleborough.

The committee in viewing stone wall, regarded chiefly the sufficency of it to protect fields against the inroads of cattle; but think the builders would do wisely in giving some attention to appearances, especially on public roads. The traveller will naturally conclude that fields enclosed with mishapen and loose walls are no more than imperfectly cultivated. The ranges of wall built by Messrs. Keith and Pratt, were distinguished for neatness in appearance, and we recommended that 2 vols. of N. E. Farmer be given to each of these persons.

In a country where there has been something of tillage more than two centries, the farmer's success will depend very much on his attention to the operations of nature and his diligence in the collection and application of those vegetable substances and alluvial soils, which time is continually depositing in hollows, on the margin of forests, by the road side, and wherever the course of the wind meets an obstruction. To encourage labors of this kind, the premiums which we have now to award were framed. The alteration from our former offers was not well understood by some of the competitors. In consequence of their misunderstanding, possibly, the committee have been led into some errors. The arrangements in future years will be better understood. We think the alteration important and useful; we cannot think otherwise, if we suppose there is any semblance of truth in what one of our orators said on a former occasion, that "in this county it is no uncommon thing for one town to blow into another."

The first premium for the collection of materials to enrich fields, $20, we award to Galen Howard, of W. Bridgewater, who has collected 526 loads. The second of $15 to Horace Collamore, of Pembroke, who has collected 344 loads. The third of $12 to Alfred Whitman, of E. Bridgewater, 330 loads. The fourth of $10 to Paul Hathaway, of Middleborough, and 2 vols. N. E. Farmer.

The statement of Mr. Collamore was distinguished for particularity, and we believe for general correctness; we recommended that 2 vols. of Yankee Farmer be given him.

As this is a visiting committee, we may be justified in taxing your patience with a few excursive remarks. Every passing season presents to the farmer numerous lessons which should be studied and applied. In a strong wind which passed over the country in the month of August, and prostrated so much of the corn, we were forcibly admonished of the importance of providing some protection for the fields by planting trees on the borders. One field was passed after the gale, where the road was bordered with trees on the north, and the corn in that field was standing almost perfectly erect. We could not suppress an emotion of regret, that the efforts heretofore made by this society to induce the inhabitants of the county to plant trees on the road side, had not received more attention. On the sea coast, raking winds are of more frequent occurrence than in the interior country: the injurious effects of them on plants and in the impoverishment of the soil will be far greater where neither trees nor stone walls are standing as breakers. We have been sorry to observe in many instances the remains of former wrong habits in tillage, in the erection of little mounds of earth round corn, potatoes, or other vegetable plants. Ridge culture belongs not to New England, except when swamps are cultivated. In this climate there is seldom any redundancy of moisture, but often deficiency; therefore our cultivation should be directed with a view to the greatest retention in the soil of dews and rains.

In our circuits in the county, we have remarked a very prevalent neglect of fields in the last of the season. The strength of the soil in many places, is more clearly exhibited in a rank growth of weeds than in the useful plants. Weeds have the same forbidding aspect to the farmer that vices have to the morallist. But the *appearance* is the least evil in the case; there is exhaustion of the soil and an abundant supply of seed to produce a future harvest of bitterness. We regard it important to direct attention to this subject, and encourage farmers to keep their fields clear of weeds as possible, through the whole season; still we are conscious this is one of the subjects on which preaching is easier than practice, and are willing to receive the application of the proverb in the full force that the appearance of our fields will justify, "physician heal thyself."

MORRILL ALLEN,
JESSE PERKINS,
*Bridgewater Oct.* 16, 1839. JOSHUA EDDY.

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From the Cheshire Farmer.

### Brown Corn—Mode of Culture.

Agreeably to our promise last month we proceeded to state the manner of tillage by Mr. Brown in raising his abundant crop of corn. To his excellent method of culture may be attributed in part his success which method would apply with benefit to any other kind of corn; but his corn we regard as superior in kind to any with which we are acquainted. Both the corn and the culture we consider worthy the attention of farmers.

Commencing in the Spring—his field having been the previous season sown to English grain and in the fall the stubble plowed in—first, 25 cart loads of rotten manure were spread upon the ground (one acre) which was then plowed very deep—then 25 loads more of long manure were applied from the window heaps and yard, and the field was again plowed deep, burying the long manure and bringing the rotten to the surface and mixing it with the soil—the corn was then planted in hills 2 feet apart each way—three stalks only were left to grow in a hill—hoed 3 times—at the first hoeing great pains were taken to clean the hills entirely from weeds, and at the other hoeings the surface of the ground was merely passed over to cut up the weeds and loosen the top of the soil—keeping the surface of the ground all the while *perfectly level* or in other words not hilling up *in the least*—used no plow, cultivator or harrow, after the planting, but did all with a hoe—cut the stalks at the usual time. This year he hoed part of the field but twice, the corn being so thick it was difficult to pass about among it without breaking the stalks. Crop, 116 bushels.

Mr. Lamprey, a neighbor of Mr. Brown who raised 131 bushels on an acre, pursued a similar method of culture.

This mode seems to us to be a good one, although different soils may acquire different treatment, and the season may also vary the result. In a season like the past, wet and cold, we have no doubt but applying a part of the rotten manure in the hill, would be better than spreading the whole; but in a dry season manuring in the hill is less beneficial. Manure in the hill brings the corn forward earlier, and, if the soil is sufficiently rich so that the well fed roots on striking out from the manure are not starved and checked in their growth, is doubtless beneficial on late soils. We took particular notice of a field this year, on part of which the manure was spread, and on the other part it was applied in the hill—the latter was full a fortnight earlier than the former, at the time of cutting the stalks. Last year we had a piece which was manured in the hill but the entire soil was not made rich—the corn grew well for a time, but soon it stopped growing and ripened very early, yielding a light crop. The reason of it is plain—the corn grew well while the roots were nourished by the manure in the hill, but when they grew beyond the manure they starved.

The prominent points in Mr. Brown's method of culture is, spreading two coats of manure, first that which is rotten and plowing it in deep, and then long manure and plowing that in deep which brings the rotten manure near the surface to nurse the tender roots of the young plant and leaves the long manure deep to feed the larger plant and mature the full ear; and also keeping the surface perfectly level. Mr. B's success proves the method a good one, and reason approves it.

The *second planting of corn*, does not amount to any thing—the stalks are barren of ears. This fact has been observed by many, but the cause could not be assigned. Now the reason is very obvious—it is this: The main part of the field gets out of the tassel before the late planted gets in the tassel, the consequence of which is, the silk of the late planted does not receive sufficient pollen from the tassel to produce the kernel of the ear. For the same reason a stalk of corn standing alone will not produce a full ear.

In case of corn not coming up well, or being destroyed by worms, we would recommend supplying the deficiency by planting beans or potatoes; or if not so late but that a second planting would answer, to plow the field and plant the whole anew. We have the past season tried (to our satisfaction) the second planting of scattering hills where the corn had failed. The product was fodder and nothing else. We noticed whole hills of this second planting of three or four stalks without a single ear or a set for an ear, any more than is found upon a stalk of broom-corn.

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### Silk Reel.

A silk reel of a simple and beautiful construction, has been made by Dr. Deane, of Greenfield, Mass., which at least answers the purpose perfectly well, and we know no higher praise that can be asked for it. It can be made for six or eight dollars, and will not be encumbered with a patent right. We shall in a few days have a model of it in Boston for the gratification of the interested and the curious.

Labor-saving machines are becoming of great importance to the farmer. While almost every thing else is done by machinery, and chickens are hatched in artificial ovens by hundreds per day, it is necessary that the farmer should avail himself of the mechanical powers in nature, to assist and further his operations, if he would not fall altogether in the rear of the other useful arts. The agricultural warehouse and plow manufactories in Boston and Worcester, will show that much has already been gained in the improvement and construction of implements of husbandry; but actual attainments should only serve to stimulate to new inventions and efforts and we can hardly be said as yet to have got a glimpse of it.—*New-England Farmer.*

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### Threshing Machine.

We have seen a Threshing Machine of an improved construction, designed to be driven by two men, which it is stated will thresh and clean at the same operation, from fifty to seventy-five bushels of grain per day. It is the invention of a Mr. Davenport, of Mount Vernon, N. H. Its construction is simple, and it is easily transported in a one horse wagon. We have not seen it in operation; but from inspection there is every reason to believe that it will fulfil its promise. The grain is separated from the straw, the straw carried to a convenient distance from the machine, and the grain passes immediately upon the riddles and comes out clean at the bottom. It is easily placed and worked on a barn floor. Its price is sixty-five dollars, and we believe it can be afforded at least fifteen dollars cheaper than that. It is said to have been in operation a year, and is likely to prove of great value to the farmer.—*New England Farmer.*

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The committee on a Geological Survey of Vermont, have reported to the Legislature in favor of the same, and of an appropriation of $6000 to carry the same into effect.

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The Illinoian speaks of a field of fifteen acres of land on Fox river, which yielded 45 bushels to the acre, and was the first year the soil had ever been cultivated.

From the Franklin Farmer.

## AGRICULTURAL EDUCATION.

☞ We publish this week, "A Plan for the establishment of an Agricultural College in the State of Kentucky," presented by a committee of the Franklin Agricultural Society. The plan was devised by a professional gentleman of Woodford, and has been handed about in manuscript among our most intelligent farmers, every one of whom has approved it. We cannot say the plan is the best that could be devised, though we do think it the best which has yet been offered for the consideration of the public. No doubt, however, it may still be improved, and it is now offered to the public in view of eliciting the aid of others in making it perfect. As to the practicability of the plan, we do not entertain a doubt. It certainly must work well; and we happen to *know* that there are a number of farmers willing and anxious to take stock in such a corporation. If we were disposed to offer any suggestions by way of improving the plan prepared by those in whose judgment we have more confidence than in our own, we would only say that it might be advisable to engraft the scholarship feature in the plan—that is, say, give any one, paying five hundred dollars, a perpetual scholarship in the institution.

We know that there are many farmers, willing to take stock in such an institution, and there are many more, anxious to send their sons to such a school for education. The next question is, whether the state will take shares, or whether she will grant aid in any way to such an enterprise. The application will be directly made to the general assembly at the next session. We shall then *see* what will be done. In the meantime, we hope to hear from Mr. Lewis, who was requested by resolution of the senate last winter, to correspond with European institutions on the means of establishing, endowing and conducting agricultural schools. That it is the imperative duty of the state to promote the formation of agricultural schools, we entertain not a shadow of doubt; and whether she is willing *now* to fulfil that duty or not, we at least feel assured the public voice will demand it ere long. A number of the counties have recently made demonstrations on the subject, which will be soon followed by others. We desire not only to see agricultural institutions of high grade established in Kentucky, in which *teachers* may be qualified for conducting primary schools, but we wish to see the elementary branches of agricultural education taught in every common school, and adopted as an indispensable and necessary part of the course of instruction. To make this effectual, however, it will be necessary to procure a series of elementary school books on agricultural subjects, which may be used in schools, and which while teaching the primary lessons of a useful science and art, will just as well enable little children to learn to read, as the miserable things, called school books, in general use. Let the state of Kentucky, therefore, perfect her common school system, by providing, like the state of New York, a well selected library for every common school in the state.

We hope that farmers, agricultural societies, and all persons friendly to the cause of improved agricultural education, will take these subjects into serious consideration, and co-operate in urging the legislature to take measures to meet the public wants, in reference to these momentous topics. In vain may a few noble spirits urge the subjects upon the legislature, unless the many, the mass of farmers, join their voice. But let *them* make the appeal and it will be irresistible. The solid good of the country, the prosperity and happiness of the people, and the durability of our republican institutions, demand an effort from every true patriot.

### To the Agricultural Public of Kentucky.

The undersigned have been appointed by the Kentucky State Agricultural Society, and by the Franklin Agricultural Society, a committee to prepare and present to you a plan for the promotion of agricultural education, and, with your assistance and co-operation, to procure its adoption by the state legislature.

Justly appreciating the public interest upon this subject, and feeling, ourselves, an absorbing and abiding interest in it, we have diligently sought information through every accessible channel. Untrammeled by party politics, unifluenced by sectarian bigotry, and unbiassed by preference for any particular scheme, we have sought only for the best plan which is practicable and best calculated to promote sound and scientific, practical and useful agricultural education, adapted to the character and necessities of the country.

To assist and guide us in the delicate and important duties, assigned to us we regret that the past has afforded but few lights of experience, and that the books on agriculture within our reach, contain but little information.

Under these embarrassments we submit to you with diffidence the plan which, with present information, we think most meritorious and acceptable; and the edifice is thus early presented to your view, that you may scan it with strictness and deliberation, so that if any imperfection should appear in its architectural design or mechanical construction, it may not be stricken down at a blow, and abandoned in its ruins; but by the aid of your experience, wisdom and perseverance, be re-modelled, beautified, and permanently erected.

We trust that the expression of your sentiments upon the subject, will be candid and unreserved, either in private communications to us, or through the medium of the public press; and be assured we will adopt with promptness and pleasure, any suggestions upon the subject which may appear to us useful.

We hope that you will more generally appoint delegates to confer and co-operate with us during the next session of the legislature, and that you will excite in your respective representatives such an interest upon the subject, as will surely result in wise and efficient action on the subject.

Aware that the minutiæ and details of any plan would be liable to much variety of opinion, and upon experience, subject to many alterations, we, therefore, present to you but an outline of the plan; and when the subject is presented to the legislature, a charter will be asked as liberal and general in its terms, as may be consistent with a full and candid expression of the *design*.

Fellow Citizens, Farmers, need we in conclusion say one word on the utility of a school of agriculture? Our soils are annually exhausting, and our crops diminishing, when the one might be improved and the other increased by more knowledge of the best methods of cultivating and manuring. Our domestic animals of all sorts constantly sicken and die of diseases and accidents, thus occasioning a vast individual and national loss, which might be greatly diminished by more extensive information of the anatomy and diseases of those animals. Our fruits, grains, and grasses are annually the prey of unknown diseases or noxious insects, which diminish our productions to the amount of millions of dollars; much of which loss might be prevented by a more intimate acquaintance with the laws of vegetation, and the character and habits of those insects. Do not these facts call most imperiously for a school of agriculture? Our venerated ancestors have erected a grand political edifice, and based it upon the intelligence of their posterity; and should we not, if possible, by general education, render it imperishable and impregnable?

JOHN LEWIS,
THOS. B. STEVENSON,
HARRISON BLANTON,
ROBERT W. SCOTT,
} *Committee.*

### A PLAN

*For the establishment of an Agricultural College in the State of Kentucky.*

The legislature to incorporate a joint stock company with a capital of $100,000, divided into shares of one hundred dollars each, the stockholders to be the corporation. The corporation to have the right to receive donations of any sort.

The state to subscribe one-fourth as many shares as may be subscribed by individuals, &c. and each share have one vote.

Of the stock subscribed one-fourth only shall be paid in, the remainder bear such an interest, and payable at such periods as the directory may appoint.

The government of the institution to be confided to a president and five directors chosen by the stockholders, and to hold their offices for five years and until others are chosen.

The capital stock paid in to be vested by the directory in the purchase of a farm (in such location in this state as they may select, regard being had among other things to the liberality of the patronage extended to the institution by the various sections of the state,) and in the erection of necessary buildings thereon, and in the purchase of implements of agriculture, and domestic animals, seeds, etc.

The farm to be under the management of a superintendant appointed by the directory, and cultivated by the labor of the students and assistants. The various works shops and refectory appended to the institution, to be also under the management of the superintendant.

The students to complete their course of instruction in four years, to labor on the farm or in the work shops four hours daily, and to pay a tuition fee of dollars a year.

The profits of the farm and of the academic department, to be at the disposal of the directory, to be applied to the purchase of a library and philosophical apparatus, or be added to the fund debt at interest for the payment of the professors, or be divided among the stockholders.

The course of instruction to be practical agriculture, and the sciences most intimately connected with it; together with mathematics, mechanics, modern languages, and belles lettres.

The academic department to be under the management of the president and such professors as the directory may appoint; their salaries to be paid out of the interest of the funded debt, until other provision is made.

When the directory may think the finances of the institution will justify it, the profits of the farm and the profits of the academic department, may be appropriated to the payment of the president and professors, and thus diminishing or extinguishing the interest on the funded debt, and when the profits shall increase and justify it, the directory may appropriate them to the re-payment of the twenty-five per cent. paid in; and when the profits may still farther justify, the directory may declare dividends to the stockholders as in other corporations.

The charter to be perpetual, and the stock to be transferable by sale and assignment, as in other corporations.

The superintendant of the farm and the president and directors of the company, to be chosen in all cases from among the stockholders; and a transfer of their interest to cause a forfeiture of their office.

The corporation to be restricted to the ownership of only so much real estate, as is strictly necessary to the design of the institution, and not allowed to exercise any privileges peculiar to banking establishments, upon the penalty of a forfeiture of charter.

A commissioner shall be appointed to procure subscriptions to the stock of the company, and when individuals or other corporations shall have subscribed 800 shares and paid the sum of $20,000, the governor shall be authorised to snbscribe 200 shares and pay in $5000 on the part of the commonwealth; and when the gross sum of $25,000 shall be paid, a call of the stockholders to be made, a president and directors to be elected and the institution to be put in operation.

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From the American Farmer.

## Bakewell, or Dishley, or New Leicester Sheep.

The intelligent reader need not be told, that these names are synonymous—*Bakewell* being the breeder, and *Dishley*, the name of his farm in *Leicester*—Hence this race of sheep are called indifferently, by either of these names.

Of this breed of sheep it is observed by that distinguished and enlightened promoter of improvements in American agriculture, Col. J. H. Powell—"Dishley sheep are remarkable for arriving early at maturity, for consuming less food, laying on more fat, and affording more weight with less offal, than any family of sheep known."

We are of opinion that for farmers who reside on the flat lands of our tide waters, and for all who reside near our large cities, this family of sheep is to be most highly esteemed, but like the Durham cattle they will not *drive* so well as the South-Down. They combine with short lags, too great a propensity to fat. Gov. Stevens who bore off the prizes for best ewes and wethers, (both being Bakewell,) at the late cattle show at Easton, (although run up to the girth by Gen. T. Tilghman, who took for second best ewes, they too being Bakewell, N. Martin, Esq., and some others,) says that if well kept, and kept over four years, they are apt to suffocate and die of fat. He proposes not to keep his sheep over three. He and Mr. Martin and the Messrs. Lloyds, and some others in that county, Talbot, where sheep husbandry, or the rearing of sheep for the butcher, is as well understood and judiciously followed, as in any part of Maryland, have no trouble in selling their sheep for seven dollars a head, when the ordinary price is not more than four or five. In their flocks the Dishley or Bakewell blood greatly predominates. Another writer, well acquainted with the properties of the different breeds most approved in England, says of the Dishley:—

"The principal recommendations of this breed are its beauty and its fullness of form, comprising in the same apparent dimensions greater weight than any other sheep; an early maturity and a propensity to fatten, equalled by no other breed; a diminution in the proportion of offal, and the return of most money for the quantity of food consumed."

To the young farmer it may be of service to add from the same writer, the following clear and judicious remarks, on the points and shape which go to constitute excellence in the form of a perfect Bakewell:

"The head should be hornless, long, small, tapering towards the muzzle, and projecting horizontally forwards. The eyes prominent, but with a quiet expression. The ears thin, rather long, and directed backwards. The neck full and broad at its base where it proceeds from the chest, but gradually tapering towards the head, and being particularly fine at the junction of the head and neck; the neck seeming to project straight from the chest, so that there is, with the slightest possible deviation, one continued horizontal line from the rump to the poll. The breast broad and full; the shoulders also broad and round, and no uneven or angular formation where the shoulders join either the neck or the back, particularly no rising of the withers, or hollow behind the situation of these bones. The arm fleshy through its whole extent, and even down

to the knee. The bones of the legs small, standing wide apart, no looseness of skin about them, and comparatively bare of wool. The chest and barrel at once deep and round; the ribs forming a considerable arch from the spine, so as in some cases, and especially when the animal is in good condition, to make the apparent width of the chest even greater than the depth. The barrel ribbed well home, no irregularity of line on the back or the belly, but, on the sides, the carcass very gradually diminishing in width towards the rump. The quarters long and full, and, as with the fore legs, the muscles extending down to the hock: the thighs also wide and full. The legs of a moderate length, the pelt also moderately thin, but soft and elastic, and covered with a good quantity of white wool, not so long as in some breeds, but considerably finer.

This account combines the main excellences both of Bakewell's own breed, and Culley's variety or improvement of it. It is precisely the form for a sheep provided with plenty of good food, and without any great distance to travel or exertion to make in gathering it.

The principal recommendations of this breed are its beauty and its fulness of form, comprising in the same apparent dimensions, greater weight than any other sheep; an early maturity, and a propensity to fatten, equalled by no other breed; a diminution in the proportion of offal, and the return of most money for the quantity of food consumed."

Under the full conviction that the genuine Bakewell may be employed with immense advantage in crossing any of our common breeds, and that, except where the finest wool is the object, (and then recourse must be had to the Saxony) a touch of this blood will be followed by an immediate and obvious improvement of form, with much increased propensity to fatten, a gentleman of adequate means and corresponding liberality, recently consented that we should order the best to be had in "the three kingdoms," and we believe we have found them in Ireland. In the expectation of getting something very superior, we are expecting hogs from the same gentleman, (Dr. Rogers Hoffman) from the writer of the following letter. It is deemed best to record it, as connected with an importation which may hereafter be referred to as the origin of a marked improvement of the sheep of our country. It cannot be expected, were it advisable, that every one should have the full blood. They are very costly to import, and the increase from this importation would be too slow to admit of it. The male only will be for sale for some years to come, but every farmer that can procure one, should have a thorough bred male, to give form, fatness, and earlier maturity to his common sheep. There is not, (as we said before, except where fine wool for the manufacturer is the object,) a family of sheep that would not be benefitted by the cross. In fact, says the foreign writer before quoted, "he has improved if he has not given the principal value to all other long wooled sheep."

It was after much careful inquiry that we selected Mr. Murdock's flock as the one from which to procure the "true grit" sort of sheep—the "genooine article." Those who may desire to be supplied with rams may now be registered. They will be sold under our direction. We will guarantee the legitimacy of such as are sold. As the stock imported is but eight ewes, there will probably be not more than four rams. The price cannot yet be stated. It will not be less than 50, nor more than 100 dollars. Half bloods from large, long wooled country ewes, will be sold for 10 dollars. Only the very best of these will be sold at all. All of inferior quality will be deprived of their commission to propagate. The half blood will give, in their progeny by common sheep, one-fourth blood, which will be visible to the most careless observer; and will be as heavy a dip as many farmers would desire. Extract from Mr. Murdock, of Ireland, to J. S. & T. B. Skinner, of Baltimore:

Dear Sirs—I received your esteemed favor of the 19th of September, and in reply beg leave to say, that the sheep and pigs you have ordered shall be forwarded from Liverpool. The sheep I could not replace at our national show, for double the price I charge you. They are bred from a ram that cost one hundred guineas. I trust they will turn out fully to your satisfaction. I write you these particulars by the Great Western, to let you know that I received your order, and if the vessel for Baltimore should sail about the first of November, most likely I will see them fixed myself, as I intend being over about that time. If you would send us a quantity of your good wheat, we could use it, and it would, at market price, pay well enough. I generally get ground at my flour mills, two thousand tons of thousand two hundred and forty pounds per annum, and some years may do double that quantity. I will have to use half that quantity of foreign to mix with the native wheat, the quality of which is so inferior. I paid last year £18 per ton of 2240 lbs. for nearly two hundred tons.

From the American Farmer.

## Spring Wheat and Barley.

We have not recently called the attention of our readers to the first of these subjects. However the agricultural public may have been surfeited with discussions respecting it, in time past, not much has been said in regard to experiments in Maryland. Upon the whole it appeared to be considered, entymologically, as belonging to the class of *humbugs*. Yet the testimony in respect of its merits and value, as in the case of tree corn, has been various and contradictory—one of its strongest advocates is Mr. Robert Garner, a very thrifty farmer, and a very close observer, on Herring Bay in Maryland. We do not now recollect precisely, but our impression is, that he said his crop of this year had yielded 26 bushels to the acre. It certainly bore a most luxuriant and promising aspect when we saw it, then in bloom. His crop was from the produce of seed which he had reaped from seed wheat procured at the north last year. Although well pleased with the first experiment, it is believed that the yield now reaped from the seed of that, was much the heavier of the two. The land was probably better, and better prepared. As however he, like many other *successful* farmers, is a regular patron and reader of this journal, we trust that he will speak for himself.

We witnessed a small experiment on an adjoining farm, which was a total failure, but the sowing was two or three weeks later, and the ground far from being good. As to the quality of the grain, we had heard it decidedly condemned as bad almost beyond redemption, by mixture with other wheats. Mr. Chew, of Epsom, in Baltimore county, this autumn left with us samples of very excellent wheat, and at the same time one of spring wheat, the growth of which had been luxuriant, and the yield large; but he said that while the millers offered him one dollar and twenty-five cents for his fine white wheat, they would make him *no offer* for the winter wheat; and we are under the impression that Col. Davies, one of the largest and most liberal wheat buyers in Baltimore, has remarked to us that the winter wheat was altogether unfit for making merchantable flour.

Looking over that very valuable agricultural work, "*Lorain's Husbandry*," from which we shall make extracts occasionally, recommending the book itself, in the mean time, as one that ought to be in every farmer's library, we find in it the following notice of *Spring Wheat*. It seems that this grain has been cultivated in his neighborhood in Pennsylvania, for more than twenty-seven years. It would appear on his evidence that there are two kinds, the bearded and the smooth-chaff—that the crop was heavy, and that the flour, though not so white as that from fall wheat, was yet not so dark as rye flour, being of a rich yellow cast, and the bread of fine flavor. We submit what he says for the consideration of those who, not having sowed down all their lands, prepared or intended for small grain, may be disposed to inquire and think whether it will be best for them to sow it in spring wheat, barley or oats. On all these grains we shall take opportunities to publish the views of those practical farmers who have given, and with great pleasure of those who may yet be disposed to give in their experience. Our own impression is, that the knowledge of the value of barley is comparatively yet very limited, and its culture by no means commensurate with its value. We shall seek as we can find time, for information on the subject. In the meanwhile let the diligent reader investigate for himself; and, if he will be so kind, oblige us with the result of his researches. We believe, but do not feel certain, that barley averages, one year with another, about 90 cents a bushel; but let us not speak prematurely on a matter that we have not sufficiently examined. Let us go back to the spring wheat. In 1821, the viewing committee of the Albany Agricultural Society awarded premiums for the first and second best crops of winter wheat, spring wheat, corn, oats, barley, and potatoes, made in eight different towns in that state. Of wheat, the largest crop per acre was in Bethlehem—64 bushels—of *spring* wheat, in Bern 36 bushels and 8 quarts; of Indian corn, in Albany, 133 bushels and 16 quarts; of oats, 93 bushels, in Westerloo—of *barley*, the report is from only one town, and there the crop was 71 bushels and 22 quarts, and the second best 79 bushels and 8 quarts. Of potatoes, the largest crop was in Coeyman's being 600 bushels to the acre. In England where turnips are cultivated universally as the basis of every course of husbandry, they are almost always followed by barley, and the crop of that grain in England is said to be from 20 to 40 bushels, while on the respectable authority of Mr. Jacobs, examined before parliament, the average crop of wheat in England and Wales is 21 bushels; that of Scotland and Ireland being much less. It is recommended to steep seed barley in a solution of nitre, as on chemical analysis it is said to contain that substance, but to be altogether free from *gypsum* or plaster of paris, and that is therefore stated to be of no value as applicable to the barley crop. Experience it is affirmed, has proved freshly cowpenned land to be unfriendly to the growth of this grain; neither does it thrive as well as oats will in moist land—a light, rich, dry soil suits it best. It should be sowed as early as possible in the spring, about two bushels to the acre. The better way to procure good seed by those who desire to make trial of it, would be to speak to the brewers, who will do any thing in their power to extend and promote its cultivation. Should any of our patrons desire to learn more on this subject, and will remind us, in case of our forgetting to recur to it, we will gladly prosecute our researches. For the present we must close these hasty observations, by repeating the belief that its culture might be much extended with benefit to the farmer, and to the cause of temperance, which is the cause of the country, and of the human family,

*Extract from Lorain's Husbandry, pages* 279–80.

I had never seen spring wheat grown before the year 1815. It was then sown by Dr. Dewees and Mr. Phillips, at the rate of full two bushels to the acre. The crop was luxuriant, and the heads large and well filled. The field on which it grew adjoined the Mushanon creek, was level as well as low, and a part of it considered too retentive for wheat. These circumstances, added to its ripening but little sooner than oats, seemed to favor mildew; especially as the wheat sown the preceding fall, was greatly injured by that disease.

The result of this crop accidentally determines that some varieties of spring wheat are vastly more susceptible of injury from mildew than others.* The farmer who was sent about one hundred miles west of this place, to procure the seed, was informed, when he arrived in the neighborhood where the spring wheat was grown, that there were two varieties of it, and that the bearded was subject to mildew, when the smooth-chaffed escaped this disease. He of course determined to procure the latter. It however so happened when the wheat shot out into ear, that a slight mixture of the bearded appeared in every direction through the field. Every plant of this description was excessively injured by mildew, while the smooth-chaffed growing in contact with it escaped.

This spring wheat seems to be equally as subject to smut, as wheat sown in the fall. That disease generally prevailed in the year 1817, in the back-woods settlements, as far as my information extended; but not so as to do very great injury in this neighborhood, except in a few fields. In this case, the spring wheat appeared to be quite as much effected by smut, as was that sown in the fall.

The bread made with the flour of the spring wheat grown here, is not as white as that obtained from wheat sown in the fall. The color, however, is not dark and ill looking, like the bread made of rye flour. On the contrary, the slight yellow tinge of the bread made with the flour from our spring wheat, communicates a rich appearance, which seems to compensate fully for its not being so purely white.

My family, neighbors, and myself, prefer the bread made of the flour of the spring wheat. We believe it has an agreeable flavor, which, though it may be readily tasted, cannot be described so as to be well understood. We say that it is sweeter than other bread; that is, it is more agreeable to us; but this is by no means descriptive of the pleasant taste of it.

It is probable that the slight yellow tinge of the bread made with the flour of this wheat, will make it less valuable for exportation. It will, however, be found invaluable to those who reside in high latitudes. By cultivating it, the risk of injury from winter's frosts, etc. is avoided: so is, also any extensive damage from the Hessian fly. As it has once escaped mildew when fall wheat was generally greatly injured by this disease, the same may again, or, perhaps, generally happen.† It may be cultivated with less labor, as much less water furrowing will do for it than for fall grain. The variety grown here is full as productive as any wheat known to me. The skin of the grain is thin. It yields quite as much flour to the bushel as fall wheat. Some say it yields more. I very much doubt, however, whether the product will be as great, or the flour as good, when this wheat is sown in warmer and drier climates. It is certain that the grain of oats sown here, is larger and better, and the product greater, than is obtained from this plant in the warmer and drier climates below us.

Spring wheat has been cultivated only three years here; it is, however, evident that it prospers best when sown as early as frost will permit it to be done; also, that two bushels to the acre is not too much seed; but it remains doubtful whether more seed would or would not increase the product.

* It is probable that if the subject were properly investigated, the same difference would be found to exist in wheat sown in the fall.

† As other spring wheat, grown in contact with it, was ruined by mildew, it clearly appears that the cause which produced this disease, existed in as full force as it did earlier in the season, when the fall wheat was very much injured by it.

## COMMUNICATIONS.

### Letter from Alexander Walsh, Esq.

Ms. Tucker—Sir—I beg your acceptance of a small present, incommensurate with my sense of your merit. The "Genesee Farmer," by its wide circulation, the industry and talents of its editor and his able assistants, has conferred a great benefit, not only on those for whom it seems specially intended, but on every citizen, whatever may be his station. Unconnected with agriculture, I yet am ever ready to acknowledge my obligation to every promoter of a science the most congenial with our nature, and the most conducive to our happiness; I had the gratifying pleasure, not long since, to present to Judge Buel, one of the most intelligent, useful, and public spirited of our citizens, a token of my esteem, similar to that now tendered to you. Alas for society, that pleasure was soon to be shrouded in mourning. The patron of agriculture, of horticulture, and of the arts, was, while actively engaged in his favorite labors, called hence, too soon for us, to receive in the world of spirits, the reward there reserved for the well-doer in this.

"Soft sigh the winds of Heaven o'er his tomb."

In reviewing the varied fruits of industry and the aids it receives from the inventive genius of man, my mind has ever been attuned to the persuasion, that whatever we owe to the beneficial talents of others, our first gratitude is due to him who makes a blade of grass grow where grass grew not before. During the many years I have been engaged in commerce, I have ever had an eye to the superior importance of Agriculture; not by handling the plow, which my special avocation forbade, but by facilitating, as far as within me lay, the application of the most approved theories to practical, but often unskilful operations of the husbandman. My own practical knowledge was necessarily limited to Horticulture, on a small scale. In the management of my garden, I have paid much attention to the growth and propagation of vegetables, fruits, plants, and flowers, and by a free distribution of seeds and their products, carefully selected from the best stocks I could procure, and cultivated with assiduity, I have, I hope, done some good. Not confining myself to the larger opportunities which presented themselves, I availed myself occasionally of the smallest means that promised success. Of this latter, you will discover an evidence by an inspection of some razors now presented for your acceptance. The words "Agriculture" and "Horticulture," etched on the blades will show, that if they are of little intrinsic value, they are yet in character; I am desirous that the farmer, even when using this implement, should be held in mind, that we are his debtors; with this view, I ordered a quantity of these razors to be manufactured for sale in my store.

Of all civil occupations, that of agriculture should be regarded as foremost: It is the most indispensable, the best preserver of health, of morality, of virtue, and of religion; it was the occupation of our first parent, and has been that of the majority of his descendants in all past ages, and must necessarily so continue to times, ends. How largely are we interested in its improvement and success! It is, however, a painful truth, that its progress in our country, is far from being exhilirating. Habits, venerated only for their antiquity, are obstinately adhered to, to the exclusion of "book farming," and this without any investigation into relative merits; numerous are the deformities growing out of this error; slovenly managed farms not arising from idleness, for idleness is not the besetting sin of the tillers of our soil; farms disproportionate to the means of proper cultivation; fields rendered unproductive by a succession of wasting crops, and then left to be resuscitated by the slow operation of nature. To these might be added many other equally obvious defects, too numerous for present detail.

It is passing strange, that while the aid of the press is consulted in support of nearly every design, even of those of minor importance, or of doubtful policy, agriculture, the most important of all, seems alone to reject its influence; this unhappy prejudice is gradually yielding to better judgment, and we may hope the day is not distant when the farmer will be no more without his agricultural hebdomadal, than he would be without his almanac.

There are certain primary principles so evident as to be within the unaided observation of every tiller of the soil, yet even these often require a friendly monitor to keep them present to the mind: others there are, dependant on scientific research and seldom to be discovered except by the studious reader. The press, in these cases, is the best monitor, and the truest instructor. In truth, the few shillings annully charged for an agricultural journal, if properly attended to, are the most productive outlay of the farmer.

The proper selection of seed grain is an important consideration. The best if possible should alone be used. Grain is liable to degenerate by long succession of unchanged seed. An occasional change of seed for that of other farmers, will often be found beneficial, insomuch, that even that received in exchange, will, although apparently of an inferior quality, frequently yield a produce superior to that given in exchange, especially if the latter has exhibited any symptom of degeneracy. The potatoe is a very necessary and valuable esculent; there is perhaps no vegetable more liable to degenerate by a continued succession of the same stock in the same soil, were it not for the friendly agency of nature, which annually scatters its seed on the ground, and thus gives birth to a new generation, this necessary article of food might be entirely lost. This effort of nature never fails in mild climates, but should not be relied on where the rigorous cold of our northen winter seldom fails to destroy delicate seeds when exposed to its action. An exchange of seed potatoes with a neighboring farmer, will generally check the menaced evil, but the true mode is to imitate nature; the farmer should every two or three years preserve a small quantity of the seed, which is contained in the balls growing on the green tops or stalks of the potatoes, and sow the same in a bed in his garden; the plants when they appear over ground, should be transplanted, and placed at the usual proper distance. The produce of the first year's growth, generally of a size too small for use, may be reserved for the next year's planting. This is deemed an infallable remedy against degeneracy, and gives the best security for good and wholesome crops in regard to abundance and quantity.

The improvement of his breed of cattle, is an object of the greatest solicitude to every farmer. He does not always know how much is directly in his power, in regard to this object. The secret, if it be one, consists, in no small degree, in a plentiful supply of food to the young animal; the full grown beast will eat less and fatten sooner, than were he neglected while young. An early attention to abundant feeding, will improve the humblest stock of cattle, while the best breed, if neglected, or not sufficiently fed while young, will degenerate and become in their maturity unsightly and profitless.

Irrigation of land is a practice of great antiquity.—History does not, I believe, anywhere notice it as a modern invention. Virgil, the son of an Italian farmer, wrote before the Christian era, and states that it was practised in his country. Irrigation, when not attended with too much expence is a valuable fertilizer of the soil. All kinds of vegetation are benefitted by a skilful application of it. Meadows subjected to its action, will yield double the usual quantity of grass, and may be mowed twice in a year. Grass thus nurtured will not, although artificial, wear out, but may, by this treatment, be preserved permanently.

The overflow of the river Nile is a display of irrigation on a magnificent scale; on the subsiding of its waters, the agriculturist almost without an effort, raises an abundant crop. Egyptian grain has, by reason of its quality and abundance, become proverbial. Lands adjoining rivers, or streams of water, where the overflows are periodical or occasional and not too frequent, produce results proportionally similar to those of the Nile. I have seen no calculation made with a view to ascertain the utmost amount of money, or of labor as the equivalent of money, which a farmer may safely expend in the irrigation of his lands. I incline to the opinion that the outlay may profitably exceed the general apprehension. The watering of the kitchen garden is deemed by the horticulturist indispensable; the labor is generally performed by hand and watering pot, the most expensive of all modes in use; yet, I believe that, on a minute calculation, it would appear that no equal extent of the farm yields so large, or, all matters considered, returns so large a per centage on the capital employed. This, if true, goes far to prove, that small farms, well cultivated, and irrigated, even at considerable expense, are more productive of profit, than large farms without the means of a thorough cultivation, and depending on casual falls of rain for the necessary moisture.

All lands, at all worthy of cultivation, contain the means of retaining them perpetually in a state of continual productiveness. Ignorance or prejudice alone would permit any part of the farm to be fallow. Compost is the common production of every farm, and is not the least valuable resuscitator of exhausted soils; it is usefully applicable to every soil, increasing in every instance the quantity of the crop. How strange that this valuable auxiliary to agriculture should be disregarded, and left scattered about the farm yard to be trodden by man and beast, and thus rendered almost useless. I send you herewith an extract which, if new to you, may be deemed worthy of a place in your useful and (I intend no flattery) truly well conducted paper.

Yours, &c. Alexander Walsh.

### Chess.

Mr. Tucker—I feel no disposition to enter into a discussion of the merits of the vexed question relative to the production of chess from wheat; yet, as the philosophy of vegetation, to be thoroughly understood, must be established by an acquaintance with all the facts connected with it, I offer to the readers of the Farmer, a circumstance connected with the production of chess which has entirely changed my views on the subject.

Although evidence on evidence had been published to prove that wheat will generate chess, sufficient to establish the belief in the minds of those giving it, still my mind repelled the idea, as the old philosophers said nature does a vacuum. One of my neighbors went so far as to tell me that if I would follow his directions in raising my wheat, he would give me five dollars a bushel for all the wheat I should get, if I would give him all the chess; still I had no faith; but for two successive years, on a small scale, I tried my neighbor's experiment; the result in both cases was an entire failure, good wheat was the product, and this strengthened my disbelief.

In the summer of 1838, I tried, for experiment, several varieties of spring wheat, among which was the Italian, which, owing to the unfavorable season, was badly shrunk. In the fall I plowed up a piece of ground that had been used several years as a garden, and sowed it to winter wheat, with the exception of a small corner, which, for experiment, I sowed to Italian spring wheat on the same day. In due season the wheat came up, and I could perceive no difference in the appearance of the two varieties. The Italian wheat I continued to notice through the winter, as I could, expecting the frost would kill it, but it retained its verdure equally well with the winter wheat, and so continued till the time of heading out, when the Italian wheat showed itself *all* chess, without a head of wheat, and the winter wheat was entirely free from chess.

I have thus given you the *facts* on this subject, which here came under my own observation. I suggest not

an opinion for others as a conclusion from the facts; but, as Pope has said

"What can we reason but from what we know,"

so I must believe according to what I have seen.

Respectfully yours, EDWARD WILBUR.

*Pittsford, Nov.* 17, 1839.

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**Remarks by the Editors.**

The above facts are certainly curious, and from the known habits of care and accuracy in the observer, may be considered as one of the most decisive evidences that has yet come to our knowledge, in favor of the doctrine of transmutation. Still, we are extremely unwilling to abandon our belief in the unformity and stability of the laws of nature, especially when the facts adduced in favor of such deviation can be explained without the necessity of recourse to such a supposition. Two methods readily present themselves, not only possible, but very probable, by which the presence of the chess can be accounted for, without recourse to trasmutation. In the one case the seed might have been in the ground, in the other mixed with the wheat sown. No one who is acquainted with the manner in which gardens are usually manured, will question the possibility of the chess seed being already in the earth; and the fact that the winter wheat contained no chess, does not invalidate this supposition, since it is well known that chess rarely shows itself to any considerable extent, if at all, in wheat that stands well, and is of vigorous growth. It is more probable, however, that the chess observed by Mr. Wilbur, was grown from seed mixed with the Italian spring wheat. "Badly shrunk" spring wheat so much resembles chess, that considerable quantities of the latter might exist without notice or suspicion. They would both spring up, but the spring wheat would be, as Mr. W. expected it would be, killed by the winter's frost, while the chess, one of the hardiest of plants, would retain its verdure, and might readily be taken for wheat by one who did not examine the botanical characters of the leaf. So far as we are aware there is no proof that ordinary spring wheats, sown and germinating in autumn, ever survive the winter. We have frequently known spring wheat sown as late as possible before the freezing of the ground, but such wheat, though the crop would be much earlier than that sown in the spring, did not germinate, so as to be destroyed by the frost. None of the spring grains, wheat, barley, or oats, germinating in the fall, can survive our winters, while winter wheat, or chess, experience no inconvenience from the cold. If, therefore, Mr. Wilbur's seed contained chess, as is most likely, since there has not perhaps been a bushel of wheat grown in Western New York this season that did not contain some chess, the result is precisely what might have been expected: the wheat would be killed, and the chess would remain; and this must also have been the case, had the chess been deposited with the manure. In our opinion, the transmutation of wheat into chess cannot be considered as proved, unless the earth is known, by examination, to contain no seeds of this plant, and the seeds sown be wheat, and nothing else. In addition to this, the growth must be conducted secure from the operation of a thousand causes that might convey chess to the earth.

In all the discussions that have been carried on in relation to the transmutation, much stress has been laid by the supporters of the doctrine, on the previous injuries sustained by the wheat seed, or on the mutilation of the plant in its early growth. If the assigned cause is so effective in this case, why should it be powerless in every other? How does it happen that the product of damaged timothy seed is not rye or oats? Why does not the mouldy or shrivelled pear seed produce the crab apple? Why is not the produce of defective, or injured cattle, goats or buffaloes? And why does it not happen that the progeny of unhealthy parents are Hottentots or Chimpanzees? The answer to these questions must be the same, which is conclusive with us on the doctrine of transmutation,—a belief we consider as improbable and absurd as any of the above suppositions,—and that is, the law of nature, which is only another name for the law of God, forbids such a change.

From the American Farmer.

**Hussey's Reaping Machine.**

We have heretofore alluded to the success which this valuable machine has obtained, and published testimonials in its favor from such sources as to place it beyond suspicion of being one of the numerous deceptions which are continually being played off upon the agricultural community. In our ninth number we published an account of its operations, together with a drawing of the machine—we now give a further notice of it by the patentee, from which it will be seen that some improvements have been made in it, better calculated to ensure its durability. We look upon it as an important accession to the list of agricultural implements now in use, inasmuch as its operation is particularly for that season when there is the greatest need of labor saving power, when assistance is most difficult to be obtained, and then but at the highest rate of wages. We commend the subject to the attention of the agricultural public, and such as wish to engage the machine for next year's harvest, should send on their orders in time, as a delay in so doing may cause a disappointment in receiving them at the period required for their use.

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TO AGRICULTURISTS.

HUSSEY'S REAPING MACHINE.

But little can be said, further than what has already been made public, with regard to the merits of this machine. Notwithstanding the speed and excellency of its work has been published from year to year, the public generally have looked upon it with a jealous eye. This jealousy has been very justly felt, not only on account of the various humbugs of the day, but also from the total failure of all previous attempts to cut grain by machinery. The first account of a reaping machine which I have discovered, is given by Pliny, and a cotemporary writer, and described by them as having been tried on the plains of Gaul, more than two thousand years ago. English scientific works also teem with accounts of unsuccessful efforts for the same object; and it is believed, that more attempts of a like nature have been made in this country within the last fifty years, than all others put together since wheat was reaped at all. Among those who have pursued this object at the expense of much time and labor, I consider myself alone successful. I trust it will require but little research to prove, that every previous attempt has totally failed. Puffs have from time to time appeared, which for a while led farmers to hope, that something valuable had been accomplished, but these have had their day, and are gone into oblivion. I trust also, that it will require as little research to show, that the machine referred to at the head of this article, has been completely successful. It has, like most other machines essentially new, had its vicissitudes. While the expedition and perfection of its work, have been the theme of praise, and admiration of all who have witnessed its operation, from its first trial, to the present time; yet experience has pointed out several necessary improvements in its general structure, and in the arrangement of its several parts, to make it a more convenient, and durable implement in the hands of the laboring man. These improvements I have from time to time made, and now feel confidence in assuring the public, that the machines which will be furnished for next year's operations will be much superior to any which I have before made, and to which I apprehend but little improvement can be subsequently added. To enable those who are yet unacquainted with the machine, to judge of the value of those now offered, it will be necessary to refer to what they have already done, in a less improved condition; this will be found in the several communications on the subject, published by gentlemen of the highest respectability in the state of Maryland, also in Delaware, Pennsylvania, Ohio, and in several other states. In addition to which, I will quote from two private letters, selected from others of a like tenor, on account of the unevenness and roughness of the ground, on which the machines referred to were used.

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*Tracy's Landing, July* 11, 1839.

MR. HUSSEY—Dear Sir: I have this morning finished my harvest, by having the aid of one of your reaping machines, which has attracted the notice and admiration of every person in this neighborhood. A more efficient machine for the purpose intended, certainly never has been constructed. My own opinion is, that it has aved me fully the cost this single harvest. Signed,

JOHN C. WEEMS.

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"I can now say that I have tried the machine: it performed its work to satisfaction, although our wheat this year was a good deal lodged, and tangled, seldom known to be more so; we can cut an acre and a half an hour, in wheat that turns out sixty dozen to the acre. It is the admiration of all—I have had upwards of fifty spectators at a time, and men of judgment all express their satisfaction with the performance. I gave the privilege for a machine to be built at Mount Pleasant; they have accordingly made a complete one, with which they have cut twelve acres in half a day. I cut 100 hundred acres of wheat in ten days. On an average seven hands did it with ease and elegance, and as much cleaner and neater than a cradle, as would pay for the cutting and binding. It performed well on all kinds of ground, hill sides, rough and smooth. I cut over some remarkably rough and stony ground, and did it nearly as well as where it was smooth. It was said by several of the spectators that it would starve the hogs. I cut one hundred acres and did not sharpen once. It was a saving at least of one hundred dollars to me this year. Signed, BENJAMIN HOYLE.

*Smithfield, Jefferson Co. Ohio, 8th mo.* 18*th*, 1839."

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It may not be amiss here to mention, that John Stonebreaker, Esq. near Hagerstown, Md. has, in addition to the machine which he purchased of me in 1827, since procured two others of the same description, having had three machines running at once in the succeeding harvest. The reaping machine, like all other machinery, requires care in using, to prevent accident and derangement. Oil must be used, and screws kept tight or disorder will ensue; occasional defects in workmanship may occur, but the most fruitful source of disaster will be found in carelessness and neglect. In making the necessary improvements before mentioned the construction of the cutting aparatus has never been changed, since the first day of its trial. To the peculiar efficacy of this part alone its whole success must be attributed. It has ever been found powerful in its movement and effect, and fully suited to its purpose. With the speed of an ordinary brisk walk the cutting is sure; every kind of vegetation of one year's growth, usually found amongst wheat, from the fine blades of grass, to locust, or oak sprouts of an inch in diameter, are cut equally with the wheat, without the least failure, or interruption to the machine whatever, yet it would be advisable to consider the last named impediments as dangerous. So sure is the cutting at all times, that a sharp edge is by no means necessary, for no sharpening is required from beginning to end of harvest, and no difference in the excellency of its work can be discovered between sharp and dull cutters. A few words will be sufficient to show what quantity of grain can be cut in a given time. The machine as now made will cut a swath something more than five feet wide; it must be very bad driving when no more than one quarter of a rod in width is cut; this is the least that can be counted upon; now every surveyor knows that a space one rod wide, and one mile long, contains just two acres; the machine will take more than this rod at four cuts, and these four can be easily made in one hour by a brisk walk, then we have two acres cut in the hour. The machine is warranted to do its duty thus far at least, provided the men and horses do theirs. In good wheat, which stands well, the machine will do good work at two miles per hour, but when tangled, or lodged, or when the wind blows from behind, a greater speed is required. In very light and short grain, a slow trot may sometimes be necessary; the machine will also do excellent work in almost any kind of grain in a quick trot, but such a speed should be avoided except when absolutely necessary, from the condition of the grain, or a necessity of dispatch. Those who intend to procure machines for next year should, at their leisure, remove the loose stones from the field where the machine is intended to operate, and put a mark over such stumps and impediments as will be concealed by the growth of the wheat; such a course is advisable, though not absolutely necessary. I have known the horses in many instances when in a brisk gait, brought to a dead stand by running the cutting apparatus against a stump, without the slightest injury being sustained thereby: but it is always dangerous to do so, and it should as much as possible be guarded against. My chief object in thus intruding myself on the notice of agriculturists, is to endeavor to dispel in some degree the doubts which have ever hung over the practicability of cutting grain by machinery. The want of such an implement has long been severely felt and acknowledged in this country, especially in the new settlements, where the seeding has been necessarily limited to the means of harvesting; with the knowledge of this fact, and impelled by the love of improvement, and a desire to promote the interests of agriculture, I have been induced to spend five years almost exclusively in this pursuit. While I claim, as an incentive to action, to be sincerely devoted to the interest of agriculture, I will frankly own, that I am not unmindful of my own private interest, I have learned to value it, having in this pursuit suffered all the evils which generally fall to the lot of those who invent, and improve, and trust to be rewarded, by the final success of their undertakings.

OBED HUSSEY.

*Baltimore, Nov.* 15, 1839.

From the Cultivator.

### The Agricultural state of Scotland.

And what has that to do with American husbandry? it may be asked. Much, we reply. We may learn from what Scotland *was*, and what she *is* in agriculture, many useful lessons in farming. We may learn our own errors in practice; and, if we are not too proud, or too conceited, we may learn, from Scotch lessons in farming how too correct them—we may learn from them how to double at least, the products of our agricultural labor. The history of Scotch agriculture for the last fifty years, is invaluable to every farmer who would improve his practice. History is wisdom, teaching by example.

We find a valuable essay in the 'Edinburgh Quarterly Journal of Agriculture,' showing what Scotland *was* and what she *is*, in regard to her agriculture. She was, in 1784, two years after the close of our revolution, "as poor as a *church Mouse*." She is now, perhaps, the richest in agricultural products of any portion of Great Britain, at least so far as regards her arable lands. The writer describes the face of the country at the middle of the last century, as "no better than that of a bleak, howling wilderness," and well, he adds, might the poet at the inn window indite—

"Bleak are thy hills of north,
Not fertile are thy plains,
Bare legged are thy nymphs,
And bare —— are thy swains."

"In 1784, a few gentlemen, full of zeal for their country, and it may be a little love of society, formed themselves into a sort of hole and corner club, in a coffee house called the Exchange, situated in the court of that name, near "the market cross of Edinburgh." Here, in the enjoyment of agreeable conversation and a good supper, did those worthies talk over plans for the amelioration of the high lands, and from this nucleus arose the now widely extended and powerful Highland Society." * * "To say what was the state of agriculture in Scotland at the date of the formation of the Highland Society, would, to treat of it minutely, require greater scope than the limits of a periodical admit." "But to take one sweep over hill and dale, cornfield and meadow, we may at once pronounce the agriculture of Scotland, at that period, to have been wretched—execrably bad in all its localities! Hardly any wheat was attempted to be grown; oats full of thistles was the standard crop, and this was repeated on the greater part of the arable land, while it would produce twice the seed thrown into it; turneps, as part of the rotation of crops, were unknown; few potatoes were raised, and no grass seeds or clover were sown. The whole manure of the farm being put on a little bit of ground near the farmstead, and there they grew some barley of the coarse sort, termed *bire*, wherewith to make bannocks, broth and small beer, or peradventure, if the farm lay at the foot of the Grampians, to brew a portion of 'mountain dew?' Since the writer can recollect, a great part of the summer was employed in the now fertile shire of Fife, in pulling thistles out of the oats, and bringing them home for the horses, or mowing the rushes and other aquatic plants that grew on the bogs around the homestead. Such was the state of Scotland, with but little appearance of amendment, up to 1792."

The general outline of this picture of wretched husbandry is suited to the present condition of many districts on the eastern borders of our country, though the filling up of the picture would require to be somewhat different.

"Time, with her ceaseless wing, had now brought in another century, and on the arrival of the nineteenth, the richer part of the low country had put on another aspect. Beautiful fields of wheat were to be seen—drilled green crops and clean fallows every where abounded—the bogs had disappeared—the thistles no longer existed. In the Lothians, all this was carried on to a great extent. The farmers forgot themselves—they were coining money, and 'light come, light go,' was their motto. They went on in the most reckless manner:—they began to keep greyhounds, to be members of coursing clubs, subscribed to the 'silver cup,' or 'puppy stakes,' and yelped the same note of folly as their betters in birth, their equals in extravagance and vice. Then followed yeomanry races—the good sturdy nag that would be of use *at a time* in the operations of the farm, was exchanged for a blood steed, and on market-day instead of rational conversation about matters connected with their own calling, they began to talk '*knowingly*' about the turf. At this time, that is, from 1810 to 1814, the agricultural horizon was the brightest; the gas was fully up, the nation was alive; all was activity and business."

But at this time the battle of Waterloo came, and with it peace and low prices. Farmers could not sustain their extravagance—they had been unable to bear prosperity—and their farms fell into the hands of more prudent managers. We have seen much of the same routine of industry, extravagance and poverty, among the farmers of our own country. Not willing to 'let well enough alone' they have embarked in speculation, or in pursuits to which they were strangers, and have gone into extravagancies and follies, to ape the great, which their means did not warrant, and which neither their comfort nor the welfare of their children required. The consequence often has been, that, like the indiscreet Scotch farmer, their land have come into the possession of more prudent managers.

But though Scotch farmers failed, from not knowing how to bear prosperity, Scotch husbandry did not retrograde.

"In 1815, the turnip husbandry had got a firm hold in the country—the benefit accruing from it was so apparent, that no convulsion in the market prices could make the farmers forsake it."

Yet the culture was limited, owing first to the want of manure to feed the turnep crop, destined to fatten the farm stock; and secondly, to the expense of driving their cattle to a distant market. Two discoveries removed these impediments. The first, "the most important," says our author, "that ever occurred in the annals of agriculture, viz., that of *bone dust*," and the second, the *application of steam*, by our countryman, Fulton, to the propelling of vessels, which enabled the Scotch farmer to transport his fat animals to Smithfield market, at a moderate expense. "So palpable was the benefit to be derived from the use of bone manue, that in a few years there was not a farmer who did not avail himself of it. The farmers could now grow turneps to any extent, and the bare fallow was exploded." We have bone dust, and poudrette, and other newly discovered means of fertility, which the farmer is shy of buying and using. We have tried them all, and are satisfied both of their utility and the economy of their application, especially upon naturally dry or well drained soils. They add much to the products of agricultural labor, without any thing like a corresponding outlay. The Scotch farmer could now grow turneps to any extent. He could fatten upon these his stock, and he could send this stock to market at a trival expense, for the "steam engine had become his drover."

But another—a third improvement followed, which we have yet to learn the value of—we mean *furrow draining* on flat and tenacious soils. Hear what our author says upon this subject:

"No man holding land ought to be ignorant of the thorough or Deanston drain. Mr. Smith, deeply engaged in the cotton spinning trade, could not procure a fall of water on the river Teith, ten miles west of the castle of Sterling, without renting along with it a considerable portion of very bad and wet land. Not liking to have a heavy rent to pay for such trash, Mr. Smith turned his powerful mind to the subject, and perceiving the folly of throwing away large sums of money on deep and useless drains, with all the stuff of tapping and boring, to *catch* the water, as if it were a wild beast for which gins and traps must be laid, hit on the idea of making drains in parallel lines in the hollow of every ridge, cutting them to the depth of thirty inches, filling them with small stones half way to the surface, above this putting a green turf reversed, and replacing the mouth. Following up his first discovery by plowing deep, he has now a farm of the finest land every seen; and so convinced is the writer of the utility of this mode of draining, that each year he has been increasing the quantity he has made, and during the last twelve months has put in above fifteen miles. Nor is the Deanston drain confined to those parts of the country where stone or gravel can be procured: the same system can be and is followed with the same effect, by using the Marquis of Tweeddale's tile; or even the poorest farmer, who has not capital to undertake costly improvements, can fertilize his farm by making the thirty inch drains and filling them with brushwood. It is perfectly wonderful to behold the mighty change this thorough-drain system is making in the different parts of the country where it is in operation: wet land is made dry, poor weeping clays are converted into turnep soil, and even what would formerly have been accounted dry, is advanced in quality. Whole parishes in the vicinity of Stirling are completely transformed from unsightly marshes into beautiful and rich wheat fields, and where the plow could scarcely be driven for slush and water, we see heavy crops per acre and heavy weight per bushel, the quantity and quality alike improved." * * * *

"It is the greatest quantity produced at the cheapest rate that will ever make a prosperous trade. If wheat is low in price, the farmer must bestir himself. Let him remember that if he can but grow one or two quarters more per acre, he will be in a better position, even with the low price, than he was before."

In speaking of the Highland Society, the writer enumerates the following means which that society adopted, as contributing largely to the mighty advance of the agriculture of Scotland:

"In the days of its youth and feebleness, the Highland Society sent the leaven of the turnep husbandry into all the glens and straths of the north, by offers of small prizes to certain Highland parishes; and the same may be said as to the growth of clover and the finer grasses. As it advanced in strength, (as to numbers and to cash,) attention was to premiums for stock; then came offers of reward to men of science to discover better implements and machines, to diminish friction and consequently draught, such as in the thrashing mill and other parts of agricultural machinery. Still advancing in the scale of intellect and of science, premiums were offered for essays to bring to light the facts connected with chemistry and natural philosophy; and, under the auspcies of the society was set up the 'Quarterly Journal of Agriculture,' a work which has been the vehicle of conveying so much useful information to the agriculturist, that we humbly venture to say it ought to appear on the table and book shelf of every farmer's parlor. After this, the great stock shows were resolved upon, as another link of union between the society and the practical farmer, at the same time throwing aside all paltry feeling, and making them open to stock from both sides of the Tweed, [i. e. from England as well as Scotland.] How well they have succeeded, let the last one at Glasgow bear witness. [This was the most splendid show of fine cattle ever exhibited.] Nor has the society forgotten the beauty of the country, as the premiums offered in regard to planting trees and such like subjects fully testify; and to sum up, all, it may be said, the Highland Society has been a *point d' appui*, a rallying point, to which the agriculturists of Scotland might look, and a fostering mother to all who, although strong in talent, were weak in interest to make it public. An ardent lover of the plow and all that can speed it, the writer of this article would advise the society of England, and all other agricultural societies who would be useful to their country, to look into the annals of the Highland Society, and from them to cull whatever may be of use in the advancement of the delightful science, the culture of the fields.

"The men
Whom nature's works can charm with God himself
Holding converse; grow familiar day by day
With his conceptions; act upon his plans,
And form to his the relish of their souls."

The Highland Society have this year offered prizes to the amount of $17,000, under the following classification:

Class I.—Agricultural machinery, 500 sovereigns and a gold and silver medal.

Class II.—Essays and report on various subjects, embracing thirty-one subjects of high interest to the farmer, viz:

1. Geologiaal surveys.
2. Reports on coal districts.
3. Mines and minerals.
4. Products of peat moss, &c.
5. Comparison between different kinds of maure in raising potatoes.
6. Extended application of water and other power to farm purposes.
7. Comparative efficacy of the two modes of thorough draining.
8. Reports on irrigation.
9. Forest planting.
10. Sheep pastures at high elevations.
11. Improved sheep salve.
12. On crossing the Cheviot with the New Leicester ram.
13. Cultivation of the recently introduced cereal and other grains.
14. Feeding farm horses on raw and prepared food.
15. Early rearing and fattening of lambs.
16. Insects injurious to agricularal plants.
17. Insects injurious to forest trees.
18. Comparative nutritive property of grasses.
19. Extirpating ferns from pastures.
20. Thorough-draining.
21. Subsoil plowing of thorough-drained land.
22. Mole plow.
23. Experiments with manures.
24. Analysis of bone or rape dust.
25. On the effects of altitude on vegetation.
26. Feeding of cattle.
27. Forests of larch.
28. On raising improved varieties of grains.
29. Reports on improved rural economy abroad.
30. Honorary premium for reports on certain districts in Scotland.
31. Investigation of certain points connected with the science of agriculture, viz:

An essay or memoir explaining on scientific principles, the mode in which [illegible] operates in producing or facilitating the germination and growth of vegetables.

An essay or memoir describing and proving, on scientific principles, what is the best admixture of the ordinary elements of soil, for promoting the germination and growth of particular vegetables.

An essay or memoir describing, on scientific principles, the mode in which lime operates in rendering the soil better adapted for the germination and growth of particular vegetables.

An essay or memoir explaining, on scientific principles, the effect of drainage in altering the constitution or qualities of the soil, and increasing its fertility.

An essay or memoir, showing the nature of the atmospheric influence on soil, in promoting its fertility, including the modification of these influences arising from heat and cold, dryness and moisture.

Class III.—Waste lands—their improvement by tillage.

Class IV.—Crops and culture.

Class V.—Pastures—their management.

Class VI.—Live stock—districts competitors.

Class VII.—Products of live stock—butter and cheese.

Class VIII.—The best kept cottages and cottage gardens.

Class IX.—Woods and plantations.

Class X.—General show of live stock and agricultural meeting at Inverness.

Having shown, by our quatations, something of the vast extent of the recent improvemements in the agriculture of Scotland, and the influence which its agricultural society has had in promoting these improvements, we have given the above sketch of their premiums, as indicating the means they have adopted, and are adopting, to bring about this great and salutary change—to show how vast a field they occupy, and the great bearing which science is made to have in the improvement of the soil, andin the operation of the farm.

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From the Cultivator.

## Address of Judge Buel,

*Before the New-Jersey State Agricultural Society, held at Princeton, on the 10th of August*, 1839.

GENTLEMEN: The short notice I had of your meeting, and of your wish that I should address you on this occasion, together with my previous engagements, have prevented my being able to give you any thing more than a brief and imperfect sketch of what it would be my wish to state more in detail, and in a less imperfect form.

The earth every where abounds with the elements of human happiness and comfort. To man has been consigned, by a beneficent Providence, the capacity and duty of cultivating the soil, and of rendering these elements subservient to our wants and our highest enjoyments. And it has been wisely ordained, that our temporal reward shall be in a measure proportioned to the fidelity with which we perform our high duties to ourselves, our fellow-men, and our Creator. The cultivation of the earth was the primitive employment of man, when

"Adam delv'd, and Eve spun."

It is still the great business among all civilized nations, and particularly so in our country. It ever must remain so, as it is alike necessary to our wants, our happiness, and our existence, as an independent people. All other arts and employments which distinguish civilized life, have grown out of agriculture. They are necessarily dependent on it for support and existence. If agriculture were to cease, or to withhold her contributions, all other arts, and trades, and professions, would fail, the face of the earth would again become a wilderness, and man a savage.

A cursory survey of the present condition of the globe, will serve to satisfy us, that nations are enlightened and prosperous, and, I wish I could add, free, in proportion to the improved or neglected state of their agriculture; and that the other arts of useful industry prosper or decline, as this parent art is productive or unproductive. Spain, Italy, Asia Minor, and Egypt, have in turn, been the graneries, in a measure, of the civilized world. While their agriculture flourished, commerce and the arts flourished among them, and they were prosperous and powerful. But as the agriculture of these countries declined, or was destroyed by the inroads of hostile armies, by the arbitrary sway of despotic power, or the corrupting influence of commercial cupidity and extravagance, the physical and moral energies of these nations were broken down, and they became impotent and servile. Some of their once fairest portions have been made desert by the violence of man; commerce and the arts have fled to countries where agriculture flourished, and their population has degenerated into a miserable set of poor, ignorant, enslaved human beings, objects of pity and christian benevolence.

The intellectual and moral condition of a people, of a district, or even of a neighborhood, may also be pretty correctly judged of from the condition of its agriculture. For if the people are intelligent and wise, this intelligence will soon manifest itself in the improved condition of the soil—for knowledge is more efficient than animal power in the labors of the farm; in comfortable and neat buildings, and in chaste and extensive rural embellishments. If they are wise, they will find in rural labor their natura theatre of action, and the sure means of improving their circumstances, and of multiplying around them the pleasures and enjoyments of life. Where the mental and physical powers are so happily combined and employed upon objects so useful to themselves and to society, as those embraced by agricultural labor, there is but little inducement—little temptation—to immoral habits. But, on the contrary, where agricultural prosperity is most manifest, we are sure to find in the inhabitants a strong disposition to maintain a healthful state of morals, and to preserve in full vigor all the relative and social virtues which constitute the main ingredients in our cup of happiness. An improved state of agriculture not only promotes intellectual and moral improvement, but it tends to lessen the evils of pauperism and crime. These are generally the fruits of indolent habits, of body or of mind, which agriculture neither encourages nor permits. Although our population are five-sixths farmers, they constitute a lean minority both in our poor houses and prisons. While they attend to the duties of their station, they are not likely either to rob or to beg to procure bread. Scotland has but few paupers, and Flanders less.

I need not remind this enlightened assembly of the important bearing which the condition of our agriculture, and our agriculturists, has, and ever must have, upon our political destinies. The farmers of our country will be the last class to be corrupted by the bribes and blandishments of power—the last class to part with republican habits—to degenerate, under the baleful and enervating influences of extravagance, dissipation and fashion. The higher the condition of agricultural improvement, the greater will be the intelligence and independence of the agriculturist, and the stronger his inclination and his influence in perpetuating the virtues of our revolutionary fathers, and in maintaining in their purity, the institutions which they established, and in defending them by force, if need be, from foreign and domestic foes. Cherish, then, this interest, above all others. Enlighten it, encourage it, honor and reward it—for it is the palladium of your freedom.

Whether, therefore, we regard agriculture as a *necessary* branch of industry, indispensable to our wants; as a *natural* employment, adapted, to the devlopement and useful employment of our physical and mental powers; or in its influence upon the moral, social and political aspect of society, we find in it abundant claims to our highest regards, and warmest support.

If we look back in history to the first settlement of this country, we shall recognize, upon our Atlantic border, a rich and fertile soil, bountiful in the returns which it annually made to agricultural labor, and a contented and thriving population. If we look at the same country now, what is its aspect? Or, rather, what *was* its aspect forty years ago, before the spirit of improved husbandry visited our shores—before science had descended to enlighten the husbandman in the principles of his business, and before the example of a better system of husbandry had begun to change our practice. Millions of our once fertile acres had been worn out by reckless management, and thrown into old fields and commons, as unworthy, any longer, of culture; and tens of thousands of other acres, possessing equal, and in most cases, greater natural fertility, had been permitted to lie uncultivated and waste, for want of draining or embanking, a nuisance to the public eye, and the prolific source of disease and death. The farmers were growing poor—were degraded by ignorance and apathy—were seeking for more lucrative employments, or flying to the west, in search of new and inexhausted soils. No cultivated grasses, no alternation of crops, no economy in manures, no thorough draining, and but poor attention to farm stock, our lands were going down, down, down, in fertilnty, till many of them no longer paid for their culture. The character of the agriculturist sunk in a corresponding degree. Men shunned it as an unprofitable, irksome, and servile employment; and every young aspirant to fame and fortune sought to gratify his ambition at the bar, the counter, or even in the humble employments of life, rather than in the business of farming.

Let us now cast our eyes to the parallel history of agriculture on the old continent, and see what changes have taken place there, while our own soil was being deteriorated and exhausted of its fertility. I will cite for illustration, the husbandry of Great Britain, and of Flanders, though if I should carry the comparison into the German states, Holland, etc. the contrast might be equally remarkable and mortifying.

Great Britain has doubled, and her Scottish territory trebled, the products of their agriculture. The agricultural products of Great Britain now annually exceed, in amount, those of 1775, according to President Humphreys, three hundred and fifty millions of dollars; and yet, in the opinion of her most intelligent men, the British soil is capable of being made to double its present products.

Of Flemish husbandry, I will enter somewhat more into detail; because, in climate, in soil, and in the general make of the country, Flanders bears a close resemblance to the southern part of New-Jersey. The climate of Flanders is very similar to this; the surface of the country is flat, and was naturally wet and cold; the soil generally sandy and poor, except upon the streams coming from the interior, and at their embouchure into the ocean. And yet, with all these natural disadvantages, there is probably no country in Europe richer in the products of the soil, owing principally to her excellent system of husbandry; and no where, apparently, is the condition of the agricultural population better—and the country more exempt from pauperism and crime, than in Flanders. Every acre, it is said, is made to maintain an inhabitant. This high state of improvement, it is true, has been the work of ages. But the sooner a work of improvement is begun, the sooner it will be completed, and the sooner it will return a profit on the outlay. The difficulties to be overcome in Flanders were great. In some cases, in order to lay the land dry, it was cut into small divisions, which were surrounded by deep trenches, to receive and conduct off the waters, and the surface graded so as to slope from the centres to the borders. In other cases seeds of larch were sown upon very poor grounds, to produce, by a process of years, a vegetable mould, from the falling foliage, sufficient to nourish a crop; and when this was obtained, the trees were cut down, and the soil subjected to careful tillage. These extraordinary cases are not stated for imitation, but to show the persevering labors of that industrious people.

The characteristics which distinguished Flemish husbandry, and which have rendered it so uncommonly productive and profitable, are: a thorough draining of the land; a perfect pulverization of the soil, by frequent and deep plowings, or by trenching; the subjecting the lands to alternate husbandry; the extensive culture of clover, of root-crops, and of tares, for soiling and winter feeding their cattle; the careful extirpation of all weeds; a remarkable attention to the saving, and a judicious application, of manures, particularly of liquid manures; a constant occupation of the ground with crops or herbage; and a judicious rotation, differing in almost every district, on account of the difference in soil and adapted and settled, after long experience, such as is best suited to the local market—as will best repay the farmer's cost and toil by an abundant return—best cultivate the soil for a succeeding crop—best enrich it for the purpose of increasing fertility, and most effectually prevent, by judicious alteration, that natural disgust which even good soils manifest to reiterated crops of the same description; the small size farms, and the keeping them in constant crop, no man attempting to manage more than he can manage well; the cutting of the forage, and grinding the grain, for farm stock, thereby greatly lessening this heavy item of expenditure; and, finally, the farmers giving their undivided attention to their farms, and their industrious frugal habits of living—no lumbering, no fishing, no speculation, no hankering after office.

I will take the liberty of making a brief comparison here, of the products of Flemish and Scotch husbandry, on the one hand, and of American husbandry on the other, in some of the staple productions of both continents, as the former were rated twenty, and the latter forty years ago.

The Rev. Mr. Radcliffe, who was sent to Flanders for the purpose of studying its husbandry, stated the average product of its soil to be—in wheat, 32 bushels; rye, 32 1-4 do; oats, 52 do; potatoes, 350 do. per acre.

Sir John Sinclair, whose reputation and veracity are well known, in his Code of Agriculture, states the average product of Scotch agriculture in good soils, as follows: wheat 32 to 40 bushels, barley, 42 to 50 do; oats, 52 to 64; turneps, 30 tons; clover, three tons; and potatoes, from 8 to 10 tons: or, allowing 60 lbs to the bushel, from 266 to 333 bushels.

M. Strickland, an eminent British farmer who resided some time in Maryland, and who travelled much in the United States, 40 to 50 years ago, in a communication to the British Board of Agriculture, stated our average wheat crop at 12 bushels the acre, except in the county of Dutchess, in New-York, where he allowed it to amount 16 bushels the acre.

Gen. Washington, in 1790, in a letter to Sir John Sinclair, computed the average crop in Pennsylvania, which he then considered the best cultivated state, as follows:—wheat, 15 bushels; rye, 20; oats, 30; Indian corn 25; potatoes 75.

It will readily be perceived from these estimates, that our arcable products were not half as great as those of Flanders or Scotland; or, in other words, that a day's labor on the farm did not effect half the benefit here that it did there. Was this owing to any natural infertility in our soil? Certainly not. Nature had been equally bountiful to both continents. But we HAD abused and wasted her bounties, while they had preserved and improved them. Our decease grew out of a bad system

of farming; their increase resulted from a more rational and improved system. The disparity arose from the science which guided labor in one case, and the want of it in the other—to that science which is still courting acquaintance, and which we must become famimilar with and apply, if we would profit largely from those privileges which God has bestowed alike upon us all.

But the sombre picture of our agriculture has undergone material changes for the better within the last forty years. In many districts, and on particular farms, the fertility of the soil has been renovated; draining has been commenced; manures have been better economised applied, and new materials of fertility discovered and employed; root culture has obtained a footing; artificial grasses have been cultivated; our herds and flocks have been better selected, and better fed: new labor-saving implements have been brought into use; the alternating system has been adopted to a considerable extent; and last, though not least, the principles of agricultural science have been more extensively diffused, better understood, and more generally applied, and a knowledge of the improvements and better practices in farming promulgated through the instrumentality of our agricultural periodicals. Wherever these innovations upon ancient practice have been made, a corresponding benefit to the cultivator, and to the neighborhood, has been palpable; lands have been enhanced in value; the husbandmen has increased his wealth, and advanced in respectability and usefulness, and every department of business has felt and acknowledged the vivifying influence of the happy change.

I have seen large tracts of land, in the valley of the Hudson, originally fertile, so worn out by bad husbandry, as to be thrown into old fields and commons, and thought unworthy of culture.

I have seen many of these same lands, in a period of thirty years, again restored, by good husbandry, to their natural fertility, and selling, for farming purposes, at one hundred, and one hundred and twenty dollars an acre.

It is to accelerate these improvements in the cultivation of our soil, that agricultural associations have been formed, and are forming, in every part of our country; and where they have been conducted with spirit, and with a view to public improvement, they have been eminently useful. It is to co-operate in these praiseworthy efforts, that the Association, which I have now the honor to address, has been established. It CAN do much in the good cause—it WILL do much in dispelling the clouds of prejudice and ignorance, which still overshadow our agricultural operations, and in diffusing light and knowledge and laudable emulation—if its members will persevere in the philanthropic determination, which I trust has brought them together—of rendering a substantial service to others, as well as to themselves.

Let us, for a few moments, descend to particulars. I think I have seen, on my passage, at various times, through New-Jersey, much land under culture, that does not give, what may be termed, half a crop, and which can hardly yield a nett profit, above the expense of ordinary labor and charges; but which might be made to yield, under the Flemish, or Scotch, or improved American system of management, a handsome income to the proprietors. Let us suppose that it would require an outlay of fifty dollars an acre, in draining and manuring, to bring thousands into a highly productive state, as productive as are now the soils in the land of promise—upon the borders or in the valley of the Mississippi—and I believe this is a very liberal allowance for the outlay—the interest of this sum would be three dollars an acre per annum. To offset against this three dollars a year, the proprietor or cultivator would probably receive an additional ten or fifteen bushels of wheat, an increase of his corn crop of twenty or thirty bushels the acre, and of other crops in proportion. A difference of ten or fifteen dollars a year, or even of five dollars, in the acreable profits of a farm, will, in a few years, make a wonderful difference in the condition of the good and bad farmer. The labor upon a good soil is no greater than that required upon a bad soil; while the pleasure of working the former, admits of no comparison with the disgust which one feels in working the latter. Does any one fail to see, in this estimate, the palpable benefits which would result from the limiting our capital and labor to the acres that we can cultivate well?

I could give many individual illustrations of the fact that I am now assuming, viz, that capital and labor may be more profitably expended in cultivating a few acres well, than in cultivating many acres badly. I will mention but a few; for no gentlemen present can have failed to notice the vast disparity in profits between well and ill cultivated farms.

A farm of 400 acres, naturally excellent wheat land, in the vicinity of Geneva, N. Y. had become so exhausted by the *skinning system*, that the owner thought he obtained a good price when he sold it at ten dollars the acre, or for $4000. The purchaser happened to be an intelligent Scotch farmer. With lime, sheep, and manure, and Scotch management, in ten years he so raised the value of these lands, that he was offered $100 the acre, or $40,000 for the farm. He declined the offer, declaring that it gave him a nett income, over the charges and expenses of his family, of four thousand dollars, or ten dollars an acre, equivalent to the interest of 150 dollars an acre. And Mr. Robinson, the present proprietor, considers his improvements as but well begun.

A Mr. Harris, near Poughkeepsie, lately gave a statement of the farm produce actually sold from his farm in one year, which, after deducting the moneys laid out for labor, etc. left him an annual income of more than $17 an acre on every acre of his farm. His farm, forty years ago, would not have brought over 25 dollars an acre. It would now sell for 125 dollars an acre.

The sandy lands of Kinderhook plains, which, in my recollection, sold from three to seven dollars an acre, now sell at 60 or 70 dollars an acre, in a state of modern improvement.

Mr. Merritt, of Dutchess, purchased 64 acres of land, which then maintained one yoke of oxen, two cows, and one pair of horses. It now maintains two pair of horses, one yoke of oxen, four cows, twenty hogs, and two hundred sheep.

Mr. Hawkins, of the Shakers Society at New-Lebanon, a few years since bought of the now President of the United States, the half of a farm of 240 acres, the whole of which then cut but twenty-five tons of hay. By manuring and good management, he is now enabled to cut on this half 120 tons of hay, and to keep in tillage some acres more than is appropriated to arable crops on the other half.

Cases have been cited, by highly respectable authorities, of instances in Pennsylvania, Delaware, and Maryland, of lands, once poor, being made to yield an income equal to the interest of 200, 300, and even 500 dollars per acre. I feel warranted in saying, from what I have seen and heard, that every tolerable good acre of land, lying contiguous to navigable waters, to market and manure, may be made to give an income of fourteen dollars—thus giving to the land an intrinsic value of 200 dollars per acre.

If a man has five hundred dollars, which he wishes to expend upon a dwelling for his family, would he be wise or prudent in exhausting his means upon the *frame* and *covering* of a *large* building, or upon the *frame*, *finish* and *furniture* of a snug neat dwelling, which should afford room enough, and be infinitely more comfortable than the big house, even were it finished and furnished to his mind? No one will hesitate to say, that the five hundred dollars ought to be expended upon the comfortable, in preference to the large house. Apply this principle to agriculture. A farmer had better expend his five hundred dollars in bringing a *small* piece of land into high and profitable culture, than to waste it upon a *large farm*, which he does not, or cannot, cultivate well, and which netts him mere nominal profits. Capital and labor are the true sources of wealth. If concentrated, they produce, in agriculture, as in every other business, a more potent effect than when they are divided, and spread over a broad field of operations. It is not the number of men that constitute the efficiency of an army; but the intelligence and skill of its leader, and the subordination and discipline of the corps. It is not the extent of lands that determines the farmer's profits, but the intelligence and skill of the master, and the high state of culture to which he brings them. The profits on fifty acres, well managed, are often greater than the profits of hundreds of acres badly managed.

The farm I occupy was naturally as poor, and forbidding in appearance, as the poor lands of New Jersey. It was considered a barren sand; and I became the butt of ridicule to some of my acquaintance, for attempting to bring it under profitable culture. It was a lean sand, abounding in springs, swamps, and low wet grounds. In twenty years, however, it has assumed quite a different appearance. It is now worth 200 dollars an acre for farming purposes; that is, it netts me more than the interest of 200 dollars per acre. My average acreable product in corn, is 80 bushels: in grass, nearly or quite three tons; in potatoes, in favorable seasons, three hundred bushels; and my other crops are in proportion. And these crops are grown at less expense, for culture, than they can be on lands that are more stiff, and naturally more fertile. These improvements, it is true, have required a considerable outlay of capital, in draining, clearing, manuring, and in some portions to the extent, probably, of 50 dollars the acre. Without the outlay, these reclaimed lands were valueless; with it, they are highly productive, and give me a liberal per cent. on the money expended; and I have no doubt I could readily sell for cost and charges. I beg to be pardoned for this allusion to my own farming. I make it, merely in confirmation of the fact, that sandy, wet lands, can be profitably reclaimed and cultivated, on this, as well as on the old continent.

Money is the sinew of agricultural improvement, as well as of war—with this difference, that agriculture is the parent of plenty, and war the cause of misery and want. Capital no where makes a more sure, and not often a more liberal return, in the end, than when judiciously applied to agricultural improvement. It is like the seed we commit to the earth. If there is no seed there can be no crop. If there is no outlay, there can be no return. And when there is not both seed and outlay, the product must be small indeed.

It remains for me, gentlemen, to suggest some of the means which present, for giving efficiency to your efforts to improve the agriculture of your state, and, with it, the moral and intellectual condition of its population; for I consider the culture of the soil and the culture of the mind reciprocally acting upon and benefitting each other. The mind must be enlightened before the soil can be greatly improved; while the improvement of the soil will afford the best facilities for improving the mind, and the strongest inducements for the formation of moral habits.

I have said that the members of this Society *can* do much towards effecting these great objects of improvement; and they can do so both in their associate and individual capacities—if they will persevere in their intention to do a *public* good. And this, after all, to a greater extent than is generally imagined, is the best way to promote, if not one's individual gain, at least his personal happiness. There is a pleasure in the consciousness of having contributed to the prosperity of those around us—of having fulfilled, if only in part, this great duty of life; which neither wealth nor distinction, without it, can ever impart. A man who is surrounded by idleness and poverty, and by their usual concomitant, vice, be his business what it may, has, to say the least, but a bad set of customers, and enjoys but few of the pleasures of social intercourse; but if surrounded by an intelligent, industrious, thriving, agricultural, population, he derives a profit, directly or indirectly, and a pleasure, from them all; and if he has been particularly instrumental in producing or maintaining this happy state of society, I don't know what higher pleasure he can expect or desire in his social relations of life.

The members of this society may do a public good in either or all of the following ways:—

1. *By the stimuli of personol example*—of doing, themselves, what they would commend in others—in the family, on the farm, and in society. Mere theory is but speculation. In agriculture, it involves expense and uncertainty. But theory, confirmed and illustrated by practice, if it has merits, is a treasure, which all who see can appreciate, and which few who do see, will fail to profit by. A good farmer, therefore, is a help, and a wholesome stimulus, to all around him.

2. *By the stimuli of competition*, to be excited by the hope of distinction and reward. Competition in agriculture calls into action our best powers; which, when once successfully put into action, seldom flag, or fail to lead to the best results. Improvements are progressive; and where we have made one improvement, we have learnt an important lesson, viz: that we can improve. This fact once impressed upon our minds, both ambition and interest impel us forward. Had we not been stimulated by competition, to make the first effort, we should never have made a second, or a third, and should have believed, as thousands now do, that because we were brought up on a farm, there is nothing further for us to learn. Revolutions in agricultural improvements, as is said in political matters, never go backwards. The great object is to give the first impulse. This, the the hope of distinction and reward, are admirably calculated to effect.

3. *By the diffusion of agricultural knowledge.* There is no intelligent farmer, who will fail to profit by the better practices of his neighbors. Agricultural journals extend his neighborhood, in this respect, over the union, and, in truth, over Great Britain also. Every important improvement, and successful practice in husbandry, will be found recorded in these journals; and although they may contain much speculative matter, there is always enough that is useful, sound, and available, to at least thrice compensate him for the price of his subscription. And those too, who profit from the communications of others, will find pleasure in communicating whatever may occur in their own practice which is likely to benefit the public, and also in promoting the circulation of agricultural journals among their neighbors and friends.

4. *By endeavoring to introduce the study of the principles of agriculture into our common schools.* Youth is the season to sow the seed of useful knowledge—to instil prrnciples which shall govern in maturer years. And where these principles are timely and properly taught and inculcated, there is but little doubt they will expand into usefulness. Education gives the impress to manhood. It makes the professed Christian, Mahometan, or Pagan; it makes lawyers, doctors, or farmers; it makes the idler, the vagabond, the libertine, or the prudent, moral, industrious citizen. As the twig is bent so will the tree incline. Every effort that is made to diffuse agricultural science, will tend to render

its pursuits more lucrative, more honorable, and desirable, and to benefit society in a corresponding degree. We want professional schools of agriculture, but, till we have them, common schools may be made a tolerable substitute for teaching the elementary principles of the art.

And, lastly, *by procuring for agriculture the patronage of the legislature.* If there is one business more important to the prosperity of the state than another, it is agriculture. If there is one business that can be more benefitted by legislative patronage than another, or whose interests it would seem the bounden duty of the legislative councils to foster and promote, than another, it is agriculture. This branch of labor gives employment to a great majority of your population; it supplies the necessaries of life, and is the good source of public and private wealth and happiness. But government alone, be it ever so minded, can do but litile to advance agricultural improvement, without the active co-operation of the people. We must put our own shoulders to the wheels, before we call upon Hercules for help. And it is a matter of history, highly creditable to the learned professions, as they are denominated, that they have always been among the most active and efficient in promoting agricultural improvement, from the circumstance perhaps, of their better appreciating its public advantages; and also, that they go to work without the prejudice and conceits, which are apt to hang, like the nightmare, about those who have been farmer bred, and which prevents their going ahead in improvement. The founder of the Highland Society, of which I shall speak further, was a lawyer, by the name of McDouald. Most of the agricultural works which have issued from the British press, and which have eminently contributed to advance that nation, as well as ourselves, in agricultural improvement, have been written by clergymen, physicians and lawyers, who were practically engaged in the bnsiness of farming. And in our own country, the greatest stimulants to improvement, and some of the best practical lessons in husbandry, have been given by men of enlarged views, and liberal minds, who have been brought up to other pursuits, but who have taken up farming, as a source of pleasure, or of profit at a maturer period of life. Enlist, therefore, by all means, men of all classes, and particularly those of enterprise, wealth and influence, in your laudable undertaking.

For your encouragement and example, gentlemen, in the work you have resolved upon, I beg to direct your attention, for a few moments, in conclusion, to what I have to offer to Scotland, and to her agricultural society; to Scotland as she *was*, and to Scotland as she *is*, in her agriculture; and to the small beginning of her society, to the measures it has pursued, and to the splendid and happy results that have crowned its labors.

And first, to show what Scottish husbandry *was*, I will quote from the Edinburgh Quarterly Agricutural Journal, the best periodical of the kind, perhaps, now, or ever published.

"To say what was the state of agriculture in Scotland, at the date of the formation of the Highland Society," says this journal, "would, to treat of it minutely, require greater scope than the limits of a periodical would admit. * * * But, to take one sweep over hill and dale, over corn field and meadow, we may at once pronounce the agriculture of Scotland, at that period, to have been wretched—execrably bad in all its localities! Hardly any wheat was attempted to be grown; oats, full of thistles, was the standard crops, and this was repeated on the greater part of the arable land, while it would produce twice the seed thrown into it; turneps, as part of the rotation of crops, were unknown, few potatoes were raised, and no grass seeds or clover were sown. The whole manure of the farm being put on a little bit of the best ground, near the farmstead, where they grew some balrey of the coarse sort, termed 'bere,' wherewith to make bannocks, or small beer, or peradventure, if the farm lay at the foot of the Grampians, to brew a portion of 'Mountain dew.' Since the writer can recollect, a great part of the summer was employed in the now fertile shire of Fife, in pulling thistles out of the oats, and in bringing them home for the horses, or mowing the rushes or other aquatic plants, that grew on the bogs, around the homestead. Such *was* the state of Scotland, with but little appearance of amendment, up to 1792."

In 1815, the scene had greatly changed. In the low country, "beautiful fields of wheat were to be seen—drilled green crops, and clean fallows every where abounded,—the bogs had disappeared,—the thistles no longer existed. Soon after this the farmer could grow turneps to any extent, and the bare fallow was exploded. The Deanston system of draining, and deep plowing were introduced; 'wet lands were made dry, poor weeping clays were converted into turnep soil,' whole parishes were transformed from the unsightly marshes, into beautiful and rich wheat-fields; and where the plow could scarcely be driven for slush and water, were to be seen heavy crops per acre, and heavy weight per bushel." Scotch agriculture has since been progressively improving, until, as I have before stated, its average products probably double those of this country.

Secondly, of the Highland Society, its origin, its operations, and its present extent, and means of usefulness.

"In 1784,' says our authority, "a few gentlemen, full of zeal for their country, and it may be a little love of society, formed themselves into a hole and corner club, in a coffee house, called the Exchange, situated in the court of that name, near the 'market cross of Edinburgh.' Here, in the enjoyment of agreeable conversation, and perhaps a good supper, did those worthies talk over plans for the amelioration of the Highlands, from this nucleus arose the now widely extended and powerful Highland Society, whose members now number twenty-three hundred, and whose, premiums, for the current year, exceed seventeen thousand dollars.

"In the days of its youth and feebleness, the Highland Society, sent the leaven of turnep husbandry into all the glens and straths of the north, by offers of small prizes to certain Highland parishes, and the same may be said as to the growth of clover and the finer grasses As it advanced in strength, as to numbers and cash, attention was turned to premiums for stock; then came offers of reward to men of science to discover better implements and machines, to diminish friction, and consequently draught, such as in the threshing mill and other parts of agricultural machinery. Still advancing in the scale of intellect and of science, premiums were fered for essays to bring to light the facts connected with chemistry and natural philosophy; and under the auspices of the society, was set up the Quarterly Journal of Agriculture, a work, which has been the vehicle of conveying so much useful information to the agriculturist, that, we humbly venture to say, it ought to appear on the table and book-shelf of every farmer's parlor. After this, the great stock shows were resolved upon, as another link between the society and the practical farmer, at the same time throwing aside all paltry feeling, and making them open to stock upon both sides of the Tweed (English as well as Scotch.) Nor has the society forgotten the beauty of the country as the premiums offered in regard to planting trees, and the such like subjects testify; and to sum up all, it may be said, the Highland Society has been a '*point de appui*,' a rallying point to which the agriculturist, of Scotland, might look, and a fostering mother to all who, although strong in talent, were too weak in interest, to make it public."

May the spirit and wisdom which have animated, and guided the Highland Society of Scotland, animate and guide this institution; and may your success and usefulness be as brilliant, as wide spreading, and substantial, as have been theirs.

I have thus endeavored, gentlemen, to show the practicability and importance of improving your agriculture, and have suggested some of the means by which this society may efficiently co-operate in the great work of improvement. The work is a noble one, worthy the philanthropist and the patriot. Its objects are the good of our country, and the happiness of man. And though you may not reach the goal of your wishes, your labors will not be lost. The seeds which you sow will produce its tens and its twenty fold, though you may not live to gather the harvest. The work of improvement which you begun, will progress, and be fraught with blessings to your children and your state. And you may be sure of a liberal reward for your exertions, at least in the conscious pride, which every good man feels, in having faithfully performed a high duty to society.

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From the Cultivator.

## Constitution of the New-York State Agricultural Society.

The style of this society shall be "The New-York State Agricultural Society;" its objects shall be to improve the condition of agriculture, horticulture and the household arts.

Section 1. The society shall consist of such citizens of the state as shall signify in writing their wish to become members, and shall pay on subscribing not less than one dollar, and annually thereafter not less than two dollars, and also of honorary and corresponding members.

The presidents of county agricultural societies, or a delegate from each, shall ex-officio be members of this society.

Sec. 2. The officers of the society shall consist of a president, four vice-presidents, a recording secretary, a corresponding secretary, a treasurer, an executive committee, to consist of the officers above named and three other members, of whom three shall constitute a quorum, and a general committee, the members of which shall be located in the several counties, and be equal to the representatives in the house of assembly.

The payment of fifty dollars or more, shall constitute a member for life, and shall exempt the donor from annual contributions.

Sec. 3. The recording secretary shall keep the minutes of the society.

The corresponding secretary shall carry on a correspondence with other societies, with individuals, and with the general committee, in furtherance of the objects of the society.

The treasurer shall keep the funds of the society, and disburse them on the order of a president, or a vice-president, countersigned by the recording secretary; and shall make a report of the receipts and expenditures at the annual meeting in February.

The executive committee shall take charge of and distribute or preserve all seeds, plants, books, models, &c. which may be transmitted to the society; and shall also have the charge of all communications, designed or calculated for publication, and so far as they may deem expedient, shall collect, arrange and publish the same in such manner and form as they shall deem best calculated to promote the objects of the society.

The general committee are charged with the interests of the society in the counties in which they shall respectively reside, and will constitute a medium of communication between the executive committee and the remote members of the society.

Sec. 4. There shall be an annual meeting of the society on the Thursday following the second Tuesday of February at the capitol in the city of Albany, at which time all the officers shall be elected by a plurality of votes and by ballot. Extra meetings may be convoked by the executive committee. Fifteen members shall be a quorum for the transaction of business.

Sec. 5. This constitution may be amended by a vote of two-thirds of the members attending any annual meeting.

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From the Madison Observer.

## The Rohan Potatoe.

*To the Editors of the Observer:*

In the early part of May last, I planted 100 lbs. of Rohan potatoes on old ground, that had been cropped for many years, which is unfavorable to the growth of potatoes. I harvested them in October, and had 173 bushels, liberal measure. I planted one potatoe, weighing 17 ounces, and obtained from it 202 lbs., filling a flour barrel rounding full and 52 lbs. over. They grew very large, 65 of the largest tubers completely filling a flour barrel. This variety of the potatoe was introduced into this country in 1836, by J. A. Thompson, Esq., of Catskill. They are spreading rapidly, and the demand for them increases in proportion as they become known. They are in high repute with all who are acquainted with them, on account of their farinaceous and saccharine properties for the feeding of stock, and are highly recommended for the table; and I will add, that I think them a valuable acquisition to our husbandry.

*Eaton, Nov. 0, 1839.* SIDNEY SPRING.

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## Wayne County Agricultural Society.

Yesterday there was a meeting of the Wayne County Agricultural Society in our village, at which there were some fine specimens of neat stock exhibited. Although the weather was inclement and the going extremely bad, yet a considerable number were in attendance evincing their interest in the subject of agriculture in this county. Agricultural societies should be countenanced and aided by every intelligent and practical farmer, for the benefits derived from them are numerous, though not at all times easily traced to their proper source. A large proportion of the improvements in the culture of the soil and in the implements and tools used for that purpose, have been effected through the influence of societies similar to the one of which we speak. The great improvement in the breeds of stock in this country commenced under the efforts of agricultural associations, and is more or less indebted to them for its successful progress. Nothing in our opinion can contribute more to the advancement of the interests of the farmers, than well sustained associations of agriculturists, and we hope that the farmers of this county and vicinity will make it a point to attend the meetings of the society in this county, and thereby in a measure avail themselves of its advantages.—*Newark Ægis.*

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## An improved method of making Coffee.

Put your coffee (after grinding) into a flannel bag, tie it closely, (allowing sufficient room to boil freely,) put it into the boiler, adding as much water as may be required. After boiling, it will be found to be *perfectly clear*, without the addition of egg, &c. having likewise the advantage of retaining its original flavor and strength in greater perfection than when clarified.—*Franklin Farmer.*

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In 1821, at the first Fair held in New York, among 20 premiums given, there was one of five dollars for the best *Loaf of Bread.*

From the N. Y. Journal of Commerce.

[*From a Correspondent in Europe.*]

## MILK.

I have recently met with a report addressed to the Medical Society in Paris, on the subject of milk, which shows the importance of procuring this food of the children from the purest source, in a new light; and proves that "distillery slops" are not the only thing injurious to its quality. Messrs. Petit and D'Arcet, distinguished chemists in Paris, were led to examine minutely the quality of different specimens of milk, from observing their very different effects upon children. Some which they examined, and which they found to be speedily thrown up by the children in coagulated masses, was proved by chemical tests to have a predominance of acidity, though it was not perceptible to the taste. Other portions which were well digested, were proved to have a predominance of alkali, which is considered the natural condition of milk. On inquiry it was found that the cows from which the first milk was obtained, were *fed in the stable*, with remnants of vegetables as well as hay, and almost without movement—that the alkaline and healthy milk was from cows allowed to *range and feed in the meadows.*

These observations led them to examine the varying qualities of milk on a more extensive scale, as to the simple fact of the predominance of acid or alkali, and for this purpose they availed themselves of a test which may be procured without difficulty from a chemist. It is paper dipped in a solution of *Litimus.* If it be of good quality, the blue color will be changed to red by a fluid which is acid. A tincture of the blue cabbage will detect acidity also, if it is sufficiently fresh, in the same way.

During a voyage through Flanders, M. D'Arcet, in company with the celebrated chemist Gay Lussac visited some of the best dairies, in which the cows are fed upon the meadows, and found the milk *without exception,* to contain a predominance of alkali. They examined the milk of cows fed in the stall on turneps, the leaves of vegetables &c., which were only allowed to pass two hours a day in the meadows, and found it uniformly acid.

The same experiment was repeated in the grazing regions in the north of France, and uniformly with the same results.

It would seem then to be fully ascertained that pure and perfect milk can only be given by cows that pass the greater part of the day in the meadows during the mild season, and that it cannot be furnished by cows which are fed upon the parings and tops of vegetables of other food than the grasses, and are deprived of exercise—to say nothing of the pernicious effects of the distillery slops or the sour and putrid remnants of the kitchen. And yet this milk must be the staff of life, of childhood—the staff of which its bones and sinews are formed; and its quality will do much in determining the feebleness or vigor of the next generation in your city. It is too true that the impure and often infected air, and the limited exercise of children in a city—added to the incessant and intense excitement of its movement and bustle—while they often render childhood precocious, and youth premature, lead to decay equally premature in a generation taken together. But surely this is an additional reason for seeking the purest and best possible nourishment in order to counteract these inevitable causes of decline.

I am sure that many a mother will thank me for adding that these chemists, on observing variations equally great in the digestion of children fed by different nurses, found the same difference in the quality of their milk—and that which was thrown up frequently coagulated, was uniformly sour when it was received—not to the taste always—but as tested by litimus paper. They observe that the child is not only deprived in this manner of suitable food, but he is obliged to call for it 40 or 50 times a day, in place of 4 or 5 times, and thus fatigues and injures her own stomach, without being nourished, and wearies and exhausts his nurse so as to render the quality of the milk still worse. Such a state of things, they say, ought immediately to be remedied, and that it can often be done by giving the mother or nurse a more simple diet, or by means of medicine, which a judicious physician can prescribe, among which they consider minute doses of super-carbonate of soda the best.

But can nothing be done to palliate the evil until we can procure pure milk? M. D'Arcet made the experiment in his own family of adding one half a grain of super-carbonate of soda to a pint of milk from a city fed cow, and succeeded in rendering it harmless at least, and so far more nutritious. One of his children so feeble that he despaired of being able to save him, was thus suitably nourished, and grew up to vigorous health, by observing daily the quality of the mother's and finally of the cow's milk, and taking the proper measures to correct its defects. Now it will be incomparably better to procure the pure milk of the grass fed cows on the banks of the Hudson and on the hills of Connecticut, than thus to feed the poor children with a drugged mixture; but it will be at least a temporary palliative until the northern rail road can be completed, and pure milk can be obtained as easily as the pure water of the Croton river.

Housekeepers will be glad to know that by adding the same proportion (one half a grain only to a pint of milk,) good milk may be kept 24 or 36 hours, without danger of souring, even in warm weather. But let them beware of converting food into medicine by increasing the quantity, for I have known this "simple, *harmless* thing," as it is called, even in the shape of excessive drafts of soda water, produce sores in the mouth and lips, which indicates corresponding sores in the stomach and this was followed by the miseries of dyspepsia and decline. An able physician assures me that he could describe the death of a patient, from a similar state of mouth and stomach, to nothing but the famed morning cordial of Connecticut lay physicans, "*pearlash and cider.*" It is time the world had learned that medicine cannot safely be used as daily food or drink without leading to disease. Yours, &c. S.

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From the Boston Cultivator.

## Rohan Potatoes.

*To the Editor of the Boston Cultivator:*

Dear Sir—I noticed in your Cultivator of last week, a communication stating the result of an experiment made by planting the Rohan and Long Red potatoes, by way of comparison, with which I was much interested. I, sir, have tried an experiment this season on potatoes; though mine was not a comparison between different kinds of potatoes, and between different manners of seeding with the same kind. I have often heard it said that the eyes of potatoes might be cut out and planted, and the main bodies of the potatoes saved for consumption, and the crop be equally good. Feeling anxious to ascertain the truth on this subject and likewise to know the relative value of small and large potatoes, whole and cut ones, &c. I resolved to satisfy myself by experiment. The spot I selected for the experiment was prepared and manured as nearly alike in every part as possible; the strip of ground was only wide enough for two rows; this strip I divided into six pieces containing four hills each, and each piece, of four hills, I seeded differently from every other; and although it was quite late, (the first of July) when I planted them, and my crop small as I expected, yet I do not know why the comparison would not be just, the lateness of the season being as favorable for one plan of seeding as for another. Last week, I dug my experiment field, as I called it. I dug each lot of four hills by itself, and weighed them myself, that I might feel satisfied that there was no mistake in weighing. For the sake of convenience I shall give you the weight of the six potatoe fields, of four hills each, in proportions or parts as follows.

| | PARTS. |
|---|---|
| Lot 1st—4 hills—one large potatoe, cut in two pieces in each hill, produced | 13 |
| Lot 2d—4 hills -one large whole potatoe in each hill | 15 |
| Lot 3d—4 hills—the eyes of one large potatoe in each hill | 3 |
| Lot 4th—4 hills—four small potatoes (which together would weigh about half as much as one of the large potatoes) in each hill. | 10 |
| Lot 5th—4 hills—two potatoes about as heavy as one of the large ones, and cut in two pieces each, in each hill | 11 |
| Lot 6th—4 hills—one large potatoe, cut into eight pieces, in each hill | 9 |

The potatoes called above, large, were all about the same size. From this experiment I have satisfied myself, at least, on these points; one is, if we wish to study economy, it would be better to eat less, and plant less, and let the potatoes have their eyes; the next is, we cannot plant too large seed; and the third is, we cannot cut potatoes too little. I have tried this experiment for my own benefit, but sir, if you think it would be any benefit to the public, you are at liberty to publish it. I intend to try the same experiment again next year, and plant early. Yours affectionately.

Marshall S. Rice.

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## Cuyahoga County Cattle Show and Fair.

The Agricultural Society of Cuyahoga County, held their first annual exhibition last Wednesday and Thursday in this city. More interest was manifested by farmers and others on the occasion, than was expected. The number of cattle, hogs and sheep exhibited, was quite respectable, though much smaller, undoubtedly, than will be the number at future exhibitions. Several lots of each of the above mentioned kinds exhibited on this occasion, were fine, especially those of the Durham cow—the Leicester and South Down sheep, and the Berkshire pigs.

There were also exhibited some fine specimens of butter and cheese; squashes, ruta baga, mangel wurtzel, sugar beet, carrot, English turnep, mulberry trees, &c.

The specimens of domestic manufacture, viz. carpeting, woolen cloths, sewing silk, silk stockings, &c., were very respectable, and it would appear from the exhibition, that the ladies in their department of labor, have not been a whit behind the gentlemen. There were also some specimens of needle work, which for taste and beauty would not suffer in comparison with like exhibitions at the East.

On Thursday the Society held a public meeting in the Stone Church, when an address was delivered by the Hon. Frederick Whittlesey, which was listened to with interest by a crowded audience. The address was valuable, and should be published and circulated among farmers generally. After the address, reports of committees were presented and premiums awarded.

We are confident that this exhibition will have a beneficial influence on farmers and others throughout this county. It will waken up a spirit of emulation, and of enterprise, which will be evinced in improved farms, improved stock, improved dairies, improved gardens, improved every thing that relates to the subject of agriculture. Such societies are, or may be productive of great good wherever they are established.—*Cleveland Observer.*

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From the New-England Farmer.

## Silk Culture.

We have now become entirely satisfied that the production of silk must advance and become a great interest of the country. In this matter we have ceased to trust to hearsay or mere report; but we have come to the knowledge of various experiments made in different places, and made with perfect fairness and the greatest care and exactness, which demonstrate that even with the high prices of labor current among us, raw silk can be produced at an expense not to exceed two dollars and fifty cents a pound. We shall presently have the pleasure of laying these reports before the agricultural public in such a form that they cannot be mistrusted or disdained. The silk likewise produced in New England is, in point of strength, weight and lustre, not inferior to any grown in any country. We know very well that many persons pronounce it very much superior, to that grown in warmer climates; but this may be so or may be otherwise. This opinion may result mainly from the habitual self-conceit, which we must confess, is a somewhat strongly-marked feature in the organization of a Yankee. It is enough for us, however, to say that the silk produced among us is as good as any that is to be found any where; and this circumstance is in itself a great encouragement to the cultivation.

We have given the last three weeks almost exclusively to the investigation of this particular subject, and at the fountain head. The inhabitants of Manchester, in Connecticut, have been in the practice of producing silk for nearly seventy years. They have found it a source of considerable profit even on the limited scale upon which it has been pursued among them. The work has been principally performed by females, and it has not unfrequently happened, where a mulberry plantation has been taken as it is termed, to the halves, the young woman taking it gets thirty to fifty dollars and her board for her six or eight weeks labor. In this case the owner of the land furnishes eggs, trees, and room to work in, besides boarding the woman while the operation is going on. The woman tends the worms, picks the leaves and reels the silk; the produce is then dvided equally.

The tree hitherto used in Mansfield has been the white mulberry In 1835, two thirds of all the trees in the town were killed by the severity of the cold. They have not as yet been replaced; but they soon will be, either by some of the same kind, or by the imported and improved varieties. In other places experiments have been made with the foreign kinds—the Multicaulis, the Canton, and the Alpine: and these experiments have been perfectly successful; the foliage has proved abundant; the silk made from them of fine quality; and the worms have proved healthy under this feed. This is a great result; and puts it in the power of any one so disposed, to ascertain the practicability and the profits of the silk culture. The question is soon settled; and the determination of it requires a small expense of money or time.

The prosecution of the silk culture will prove of immense importance to the country. For half a century to come there can be no danger of its being overdone. The demand will, as matter of course, increase with the supply. To meet the present wants of the country, is no small matter; and years are likely to elapse before we can reach this point. Why it may not hereafter be made matter of export from the country, no good reason can be given; at least no better reason than could have been given forty years ago, why cotton should not become an article of export from the country.

We look forward to the production of silk with the highest satisfaction and interest, as affording a most de-

sirable resource for aged persons, who, incapable of enduring severe toil, have not yet passed the period of useful labor; for young persons, whose services could be made useful only in some such light employment; and for indigent persons, decayed widows and females, who often find it extremely difficult to obtain or invent the means of support.

It will have some prejudices to encounter from persons who are habitually distrustful of every new project, and the extravagant calculations and most exaggerated estimates of profits to be expected from it, which are constantly made and put forth by the ignorant or designing, must operate much to its hindrance and disadvantage. The public mind will presently be disabused in all these matters; and results, resting upon the most careful and decisive experiments, and such an accumulation of settled facts as leaves no room for doubt, will set every thing right. The culture of silk will go on and prove a source of profit to industry and good management sufficient to satisfy every reasonable desire and to compensate most amply the labor bestowed upon it.—We forbear further statements on the subject at this time, as we shall make it matter of full examination and discussion in our next report to the goverment.

H. C.

From the American Silk Grower.

### On keeping Silk Worm Eggs.

Immense quantities of silk worm eggs have been lost this season by premature hatching. In one instance, upwards of one hundred ounces, that had been imported from France, and that had been kept since their arrival in this country in a refrigerator, at a temperature of *forty four degrees*, all hatch before there was any mulberry leaves to feed the worms with, and they were of course all lost. The unusual warm weather of the month of April, has doubtless caused much loss to those who had kept their eggs in the usual way. These losses, however, though a present evil, will result in ultimate gain. They will prove by example what almost every body has heretofore refused to learn from precept, to wit: That silk worm eggs must be constantly kept in a cold place, from the time they are laid, till they are wanted for hatching; and that any exposure to warmth at any time during winter or early spring, will certainly start the growth of the embryo, and insure the premature hatching of the eggs. Again and again has the writer of these remarks cautioned the public on this subject. The object of this paper now is to give a few hints that may be useful in securing eggs for another season.

In no event can imported eggs be depended upon for any thing more than raising a few worms, for a future supply of eggs; because during the passage they are necessarily exposed to a warm temperature, and if they arrive safe, will certainly hatch soon afterwards; in which event but few can be saved, unless they happen to arrive after the leaves are developed, which is scarcely to be expected, as the warm weather would hatch them on the passage. It is probable that if they were imported in the fall, and immediately placed in an ice-house and kept there steadily till wanted for hatching, they might be kept till the middle of May, in this latitude, but not longer. Thousands of persons have now learned from experience, that silk worm eggs hatch as readily in an ice-house as any where else, if they have at any time previously been exposed to a warm temperature.

It is earnestly recommended that all persons who are fortunate enough to have silk worms, now select from the first formed cocoons a sufficient number to produce as many eggs as they may want for next year's use, and within three or four days after the eggs are laid, place them securely in a very cold, dry cellar, or an ice-house, and there keep them steadily till wanted for hatching next season; they may then bring them out in such portions as they wish for successive crops during the season. Those kept in a cellar, however, during the fall, must be put into an ice-house before the 1st of February, or they cannot be kept from hatching in May.

Eggs that have been carried about the country during winter cannot be kept from hatching during the warm weather, the latter part of April and in May. Therefore, purchasers of eggs, under such circumstances, should be prepared to feed the worms by the 1st of May, at the latest, in the latitude of Baltimore.

The French and Italians scrape the eggs from the cloth or paper on which the insects has deposited them, before exposing them to hatch. Indeed, many of them keep them "in bulk," like a parcel of seeds, from the time they are laid till next season, and most of the eggs that are imported into this country are put up in boxes, like so many cabbage seed. Notwithstanding the high authority from which this practice emanates, we are well convinced of its impropriety. The close contact of so many animated existences, we should naturally conclude, even without experience, would generate heat, foul air, and finally cause the death of the whole. And that it has this effect, is abundantly proved by numerous instances where they have been imported in this way, and on opening the boxes, the putrifying mass of eggs was extremely offensive, the eggs being all dead. Another objection is found in the difficulty of hatching worms from these loose eggs. The little insect, when he gets his head and fore legs out of the shell, reaches its claws ahead, and seizes hold of the paper or board, and in this way speedily pulls himself out of the shell; but if the egg be not fastened to the paper, he cannot thus pull himself out, but pulls the shell along. In this way we have seen a little worm working and struggling for an hour, and very often perish at last. It is not uncommon to see them come out *tail first*—in that case, they are worse off still; for as soon as their first pair of feet touch any external object, they push themselves about, with the shell covering their head and fore part of the body. When the eggs are left glued upon the paper, as is the custom in this country, they are consequently preserved with more certainty, and at the time of bringing them out, none of the worms are lost from difficult hatching from the above cause. G. B. S.

From the New England Farmer.

### Obituary.

Died, at Pittsfield, Mass., on the 8th inst., THEODORE SEDGWICK, Esq., of Stockbridge Mass.

It is our painful duty to record the death of this estimable and excellent man; and it is a debt due as much to public morals as to private virtue, to hold up this bright example of integrity, honor, truth and patriotism, to the encouragement and emulation of the friends of virtue, wherever he has been known.

If it should be asked what claims have his life and character to notice in such a publication as ours, we answer that Mr. Sedgwick was eminently the friend of the laboring man, the admirer of rural and agricultural life, and the most ardent advocate for the education and improvement of the industrious classes of society; and for every public enterprise and work which had in view particularly their elevation and comfort.—It is delightful, and amidst the selfishness and meanness which every where pervade society, it is a precious consolation to be able to recall the memory of so excellent a man.

Mr. Sedwick was endowed by nature with superior talents, and these were cultivated and improved by ample advantages of education and a wide and familiar intercourse with society in all its various departments. His perceptions were extremely rapid; and he arrived at his conclusions with a quickness and certainty, which are rarely seen, even among the highly cultivated, and which always evince a comprehensive and powerful intellect. He was a man of much originality of mind, and distinguished by an extraordinary energy of thought and feeling. If his opinions and conclusions were not always deemed sound and true, (and where on earth are perfect consistency and wisdom to be found?) yet no one, much as they might in any case differ from his own, could for a moment doubt that they were the honest convictions of a perfectly true and incorruptible mind; a mind incapable of being biassed in its decisions by any little, low, or mean purposes or interests. He was indeed a true man; and in that purity and elevation of character which rendered him as utterly incapable of a mean purpose or thought as of a mean action, he might justly be pronounced one of the noblest of men.

His conversation was full of instruction and information; his manners kind and courteous, and in every condition of life in which he was placed or was called to act, he displayed an exemplariness of good conduct, which conciliated universal affection and regard. His manners were unostentatious, and of a transparent simplicity and frankness. In the private and domestic relations of life no one was ever more beloved; and as a citizen in the official services of public life, let the rancor of party be as bitter as bitter can be, no one ever distrusted, and no one ever presumed to cast a suspicion or reproach upon his sincerity, integrity, honor, and disinterestedness.

He was at home at once upon every subject which concerns humanity. A few years since he made a visit to Europe; and his observations on the condition of the poorer classes, show a heart deeply wounded by the injuries and oppressions under which they were often crushed to the earth; and in which a benevolent desire for their relief and amelioration of these evils wherever they might be found, predominated over every other sentimen. Such men as he are rare in the community.

It becomes every poor man and every working man, woman and child in the community to cherish the memory and character of such a man, let his religious denomination or his party attachments be what they may, with the strongest affection and respect. We believe that in purity of purpose and kindness of heart, and in perfect honor and uprightness, he has not left his superior behind him.

H. C

From the Farmers Register

### Benefit of Liming, and green manuring with Peas

*Beaufort, co. N. C. Oct.* 11 1889.

I learn by your communication to me some time since, that it is your wish that I should let you know my plan of liming, and also that I would communicate the same for the register. I would cheerfully do so, but that I am a plain, and fain would be a practical farmer, and have never written any thing of the kind. But, however, for the sake of being of any benefit to agriculture, if any benefit may be derived from the few hints that I may advance, I will now attempt to comply as far as my feebie efforts are capable of doing.

When I took possession of my farm, I found it in a very poor and worn out state, so much so that I became almost discouraged, and would have emigrated to some other one, had I the means to have done so without making a sacrifice; and not willing for that, I came to the conclusion that I would remain where I was, and see what I could do by way of improving my poor and worn out land, which I commenced by raking and scraping all the manure I could fall in with; and coming across a treatise in some one of your volumes upon liming, I fell upon that to see what I could do with it. The first part or cut of my field that I commenced liming, was of a kind of stiff and sour soil, subject to almost (I may say) every kind of insect; and it was with great difficulty I could get corn to stand on it. But as soon as I commenced liming I found that there was a great difference in the nature of the soil as well as the quantity of the grain, which induced me to procure all the shells I could get, and put them upon my land; and I can now say that I have improved my land, from liming and other manures, of which lime is the prominent part, from 25 to 50 per cent. My plan is to burn the shells just so that they will crumble.

I prefer putting them out on the land in the spring, say the last of March upon land that I intend putting in corn; spreading the lime broadcast; and about the last of June, or by the first of July, I sow the same land in peas, which is the last working I give my corn. As soon as the corn will do, I take the fodder off. As soon as that is got through with, I proceed to weed all down between the rows, peas and every other vegetation, which as soon as done, I proceed to gather the corn and sow wheat upon the same, taking care to run a furrow each side of the ridge in the row with a single horse plow before sowing, so as to cover the ridge up as near as possible; the balance of the row I break up with the same plow. But before I sow my wheat I soak the quantity I want for seed in strong lime water, say 24 to 36 hours; after which I strain it through a basket or colander, and as soon as that is done, I roll it in slacked lime until every grain is perfectly saturated with lime, so that it parts, in which state I let it go to the ground, taking care that the seedsman uses a little grease of some kind on his hands to prevent the lime from injuring them. This process I think, and am certain, is a preventive from the smut; and putting it on limed land I think is an obstruction against the rust, or at least I have not been troubled with either since I tried the soaking and liming. The quantity of lime I generally put on my land is from 40 to 50 bushels to the acre, afterwards sowing down in peas as above stated; and I can say this year that I never was more gratified; for I never saw a more flourishing crop of wheat on the ground in all my life, (and my neighbors certified to what I now say,) for I raised 25 bushels, to the one sowed; and I had the same piece of ground in wheat three years ago, and I am certain I did not raise ten to one. I am now preparing the same land, and am in hopes to be able to have it ready by next week; and if the season suits, I am certain to get thirty for one, as I shall have my land in better order; besides I have another coat of manure upon it.

I have tried the cuttings (or slips) of Irish potatoes which I saw in one of your numbers, and find that good ones can be raised from the tops. I cut a few this summer after they had got up about a foot high, and planted them crosswise of a small ridge I had made for the purpose, and they were almost as large as those I planted, which I obtained from the north.

A FRIEND TO AGRICULTURE.

### Beet Sugar.

The beet sugar establishment in White Pigeon, Michigan, is now in full operation. The machinery all works well. We expect there will be some of the sugar made in a few days. Quite a quantity of molasses has already been made. We expect to tell a loud story soon.

*Wheat.*—The Cleveland Herald of the 5th states that the receipts of wheat at that port during the preceding month, were 377,115 bushels; and of flour 46,488 barrels; and in the past seven months, 1,380,620 bushels of wheat and 240,550 barrels of flour. The amount of wheat trebles that received two years ago.

### Diseases of Horses.

Mr. Tucker—As every useful fact added to your very useful periodical, (The Genesee Farmer,) makes it more and more useful to the agriculturist, (those great guardians of animal support and national wealth,) if you think the following worth the room it may occupy, you are at liberty to insert it. A few years since, I owned a colt, which, from his pedigree and promise, I thought much of; but when 7 or 8 months old he appeared unwell, and dwindled, (while I was doubting what his disease could be,) a few weeks and died. As nothing more could be done for him, I availed myself of the opportunity to examine, to demonstrate what the disease had been. Upon an examination, about 3 feet of the "Duodenum," (from Duodeni, 10 or 12 fingers wide in man,) the intestine next to the stomach was literally distended and crowded full of worms, similar to the lumbrini or round worm, that infests the human intestines. They were quite uniformly of one size, and generally about 6 inches long, crowded together parallel, or lengthwise of the intestine, and in appearance very much resembled human worms of the same size, except they were a few shades darker, which I imputed to the color of their food; but whence they came, or why they congregated so many together, I know not; however, I have but a little doubt, as the Chyme, from "Chymos," a juice directly from the stomach, to be there converted into chyle, (the milk like fluid,) to pass into the blood vessels for the nourishment and support of the animal body, from the Duodenum, (the organ for its preparation, the worms were impelled there as their last resort for support, which probably exhausted the life of the animal, as they were so literally packed in that probably but a small quantity of any solid substance, and little or no liquid could pass, therefore, death was inevitable, unless the cause was removed. From a view of the case, (if my theory is correct,) I think there could be but a little doubt about the method of cure, viz: to nourish the animal in the best manner, and at the same time work the destruction of the vermin. Had I but have known what the case was, I think I could have succeeded as follows, viz: a tea cup full of spirits of turpentine, well mixed with a tea cup full of sugar, a tea cup full of molasses, and a pint of new milk, morning and noon, and half of a tea cup full of pulverised gum aloes, well mixed with half of a pint of molasses, and half of a pint of castor oil, in the evening, increasing the dose until it killed or cured. Having owned horses for about 30 years, and often used more or less of the above medicine, in cases that I supposed to be cholic or bots, and seen relief generally follow, and knowing the turpentine to be a great destroyer of the vermin tribe, I have much faith in its efficacy. As probably similar cases often occur, if the above shall be of any use to any of your numerous readers of the Genesee Farmer, which, (or a similar work,) should be read by every agriculturist in our land, I shall feel paid for this evening spent in writing the above, entirely from my memory of the case. I should feel much gratified, if I had time and ability, to add from time to time to your useful work, which I feel a large portion of our fellow citizens owe you a debt of gratitude for; but hope you will never lack a liberal patronage and prompt pay, while its present merits are sustained.

*Brighton, N. Y. 28th Oct.* 1839. Spectator.


### Peach Trees.

About 25,000 Inoculated Peach Trees for sale in the fall of 1839 or spring of 1840, and about 80,000 in 1840-1, at the Nursery of the subscriber, in Haddonfield, N. J. six miles from Camden, of the following kinds—Large Early York, Troth's Early Red, Red Rareripe, Red cheek Malacaton, Morris's White, Ward's Late free, Hi's Madeira, Royal Kensington, Old-mixon clear, Incomparable, Yellow Rareripe, Magnum Bonum, Nonesuch, Mickle Peach, York Red, Cooper's late Red Rareripe, Cooper's Mammoth, Free stone Heath, Chancellor, Tatem's Peach, Turner's Peach. (The above are freestone.) Calaber's Pavie, clingstone, Old-Mixon, do. Gross Mignon, do, Late Heath, do.

These trees are two years old from the stone, being one year from the bud, and from 5 to 7 feet in height, and of good thickness at the butt; they have been inoculated by experienced hands, and no pains have been spared in the cultivation, to have them as fine as can be or ever have been produced. They are not grown twice upon the same ground, and ashes is used as the manure, which is the most effectual method to prevent insects either in the nursery or afterwards. They are warranted to be of the kinds specified.

No charge for delivering in Philadelphia, in quantities of 500 or upwards.

Apply at the Nursery, or to Richards & Bispham, Auctioneers, 34, south Front st. Philadelphia. DAVID ROE.

Haddonfield, Nov. 27, 1839.


### UNION OF THE GENESEE FARMER AND CULTIVATOR.

Since we announced to our friends our intentions and prospects for the future publication of the Farmer, we have received from Mr. J. Buel, Jr., a proposition, (rendered proper and necessary by the death of his lamented father,) for the union of the Farmer and the Cultivator, the publishing business to be continued as formerly by him, and the Editorial responsibilities to be assumed by ourselves. Mr. Buel has since visited us; and, after full consideration, an arrangement has been effected, satisfactory to ourselves, and which, we trust, will prove no less so to the patrons and friends of both Journals.

The united paper will be issued at Albany, under the title of

**THE CULTIVATOR:**

BEING A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

The first No. of which will be published on the 1st of January next. Willis Gaylord & Luther Tucker, Editors; Jesse Buel & Co. Proprietors. Albany, rather than Rochester, has been selected as the place of publication, from the greater facilities of obtaining paper; the procuring and engraving of the numerous cuts required in such a work; and its generally more central and favorable situation for receiving and forwarding packages and communications to all parts of the country.

That the interests of the subscribers will be promoted by the union of these Journals, is confidently anticipated. The vast amount of practical knowledge and skill, contributed to the columns of the separate papers, will now be embodied in one; and while each could boast of a circle of contributors of high rank in the science and practice of farming, it is scarcely possible their concentrated labors should fail of giving one of the most valuable agricultural journals of the world. To the subscribers for the Monthly Farmer, the price of the new paper will of course be enhanced,—the price continuing at one dollar per year; but when the increase in the size and quality of the sheet,—the greater quantity of matter that will be given by the use of close and smaller type—the number of cuts and illustrations that will be employed, and the general improvement in the united paper are taken into consideration, it is believed it will be found as cheap as the former, and as well worthy of their support and patronage.

In short, no effort shall be spared to give the united paper a character worthy of the high rank and standing which the original journals, on their separate merits, had acquired. Devoted solely to the cause of the agriculturist,—to his instruction and improvement as a cultivator of the soil, and to his moral and intellectual elevation as a man and citizen of the Republic we trust a paper will be offered worthy the confidence and the support of the American farmer.

All subscriptions to the Weekly and Monthly Genesee Farmer will, in consequence of this arrangement, terminate with the present year. We anticipate, however, and most respectfully request, that those kind friends who have heretofore done so much as Correspondents and Agents, to give the Genesee Farmer its high character and extensive circulation, will extend to us, in our removal to a more extensive field of usefulness, their continued assistance and kind offices. Post-Masters, Agents, and others, who will obtain subscribers, and transmit the subscription moneys free of charge, will be allowed commissions at the following rates:

| | |
|---|---|
| For ten subscribers or over, | 10 per cent. |
| twenty or over, | 15 " |
| fifty or over, | 20 " |
| one hundred or over, | 25 " |

It has been decided by the Postmaster-General, that Postmasters have the right to enclose money to the publishers of newspapers, for third persons. This liberal construction of the post-office law, we hope, will induce Postmasters to take an interest in the circulation of our paper, which we may assume, without vanity, will tend to improve agriculture wherever it circulates, and consequently to benefit the neighborhood.

In relation to the price of the Cultivator, which has been published for the last two years at one dollar a year, we copy the following from a recent number of that paper:—

"The publication of the Cultivator was commenced at 25 cents per volume; the price was afterwards advanced to 50 cents, and at the commencement of the fifth volume, to One Dollar per annum. It is due to our patrons to explain the cause of this increase in price. The size of our pages has been enlarged, the quantity of matter increased, and the quality of paper improved, until the expense of type-setting and paper, the two prominent items of our expense, is now more than double what it was when the price was fifty cents, and four times as great as it was when the price was but twenty-five cents. To enable the reader to judge of its now relative cheapness, compared with literary periodicals, we state, for their information, that a volume of the Cultivator, including its usual extra sheet, contains about double the quantity of matter that is contained in two volumes, published in a year, of the North American Review. The subscription price of the two volumes of the Review is Five Dollars—that of the Cultivator One Dollar. To be equal, in proportion to the quantity of matter, the price of the Cultivator should be Ten Dollars a year.—We are only enabled to print the Cultivator at this small price, from the extent of our subscription; and we are indebted for our liberal subscription o the kind offices of our correspondents and agents."

We shall send out with each of our packages this month, a Prospectus for the united paper; and should any gentlemen to whom it may be sent lack leisure to present it to his neighbors, he will do us a favor, and we think a public service, by placing it in the hands of some one who will take an interest in soliciting subscript.ons. It should be returned, or a list f the subscribers be sent to JESSE BUEL & Co., Albany, at as early a period as may suit the convenience of the agent.

☞ Agents and others who are indebted for the Farmer, are particularly requested to forward us the balances due, with as little delay as possible, as we wish to close up the accounts for the Genesee Farmer as speedily as possible. We shall keep our old office open at *Rochester*, for the settlement of accounts through the ensuing winter, where also subscriptions will be received for the Cultivator, though all letters intended for that paper, should be addressed to Jesse Buel & Co., Albany.

☞ All subscribers who have paid in advance for either the Weekly or Monthly Farmer, will have the united paper continued to them until their advance payments are exhausted. Should any one, however, prefer to have his money returned, it will be remitted in any way he may direct.


### Mulberries, Fruit Trees, &c.

Wm. PRINCE & SON, proprietors of the Nurseries and Mulberry plantations at Flushing, near New York, offer for sale the most choice and valuable assortment of Mulberries, to be found in the Union, comprising the genuine Morus Multicaulis, American Multicaulis from seed, very hardy, Expansa, Elata, Alpine, Canton, Broussa, Rosa of Lombardy, Dandola, Pyramidalis, &c., the six first named being placed according to merit. Also Fruit and Ornamental Trees, Shrubs and Plants, Bulbous Roots, Field and Garden Seeds, &c., about one hundred bushels of Rohan Potatoes. Priced Catalogues will be sent to every applicant, and the articles will be shipped to any port or delivered to any transportation line in New-York, and their receipt taken for the delivery as directed.

### Morus Multicaulis Trees.

THE subscriber has now on hand for sale, well secured in a Cellar, a quantity of genuine Morus Multicaulis Trees, which he will sell at the market prices, proportioned to their size. Application by letter, post paid, or a call at his residence, will receive prompt attention. nov23 GEO. W. ROBINSON.

Baldwinville, Onondaga Co. N. Y. Nov. 18, 1839.

### A Rare Chance.

FOR SALE.—A Partner wishing to withdraw from an old established Agricultural Implement and Seed Ware-House having a good run of country custom, would be willing to dispose of his interest on liberal terms, as he is about engaging in other pursuits. To a person wishing to engage in a respectable and profitable business, having some ready capital, it is an opportunity rarely to be met with. A liberal credit will be given on most of the purchase money, if properly secured. Any communications addressed "La Fayette," New-York City, will be treated strictly confidential. November 13, 1839-w4t

### Morus Multicaulis and Morettii.

ELLWANGER & ROGERS are prepared to make contracts to any amount, for genuine Morus Multicaulis and Morus Morettii; the Morrettii are hardy, and will stand the winter in this country.

Any persons living at a distance and wishing to purchase a large quantity to sell again, shall be supplied at the very lowest wholesale prices so as to admit of their selling at the same prices as other persons, and make a very handsome profit. Also Silk Worms Eggs.

E. & R will supply orders to any extent for every kind of Fruit & Ornamental Trees, Shrubs, Vines, Hardy Plants, Bulbous Roots, Greenhouse or Parlor Plants, &c. &c.

September and October is the time for planting Bulbous Roots in the open ground, such as Tulips, &c. of which they have a very fine collection for sale. Cash paid for Grass Seed, Plum, Peach Stones, and Apple Pips. Greenhouse corner of Buffalo and Sophia streets Rochester, N. Y. sept14-wtf

### Morus Multicaulis.

THE subscriber is prepared to furnish Morus Multicaulis (Mulberry) Trees, in large or small quantities, delivered any time this fall after the first of October. The trees will be raised from Roots, Layers and Cuttings, of thrifty growth and matured wood, and will be sold at prices in proportion to their size. October and November are the most favorable months to transport them to the Western States, or into Canada, or in any direction where they must be sent a distance by water communication. All orders from a distance, by mail, should be sent early, (post paid,) addressed to

E. H. MIX,

July 27, 1839.-w6m Avon, N. Y.

### Berkshire Pigs,

DIRECT from the stock of C. N. Bement, Albany, for sale by THOMAS WRIGHT,

October 19, 1839.-w3w Near Macedonville, Wayne Co. N. Y.